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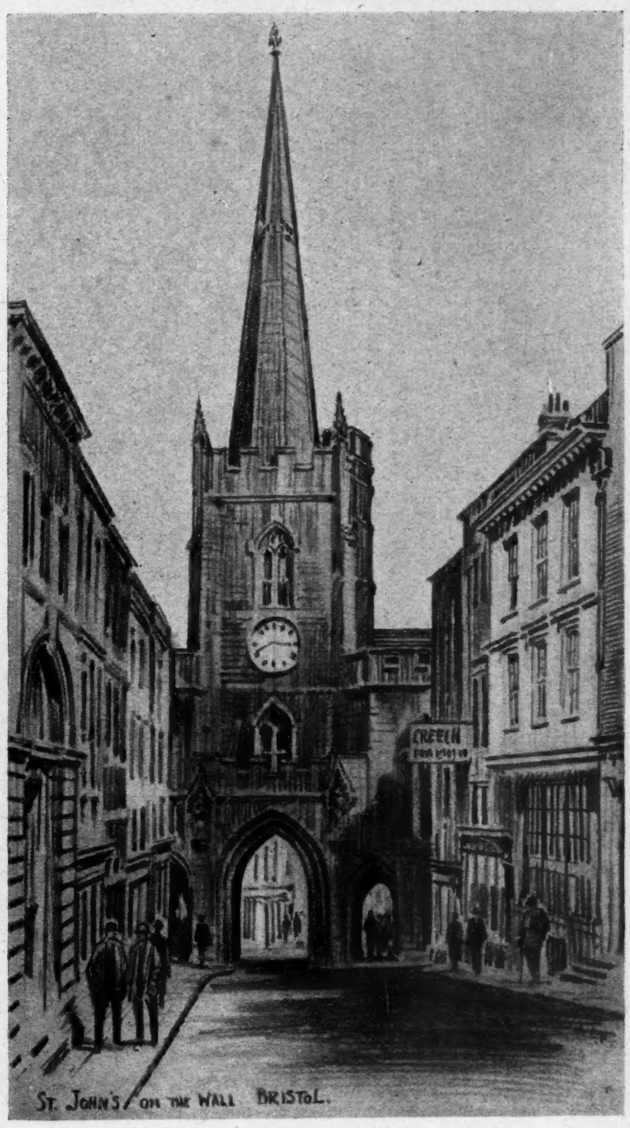

ST. JOHN'S ON THE WALL, BRISTOL.

FROM A PENCIL DRAWING BY MR. A. C. FARE, R.W.A., A.R.I.B.A.

MEETINGS

Friday, June 24.

Town Planning Institute. Dr. Thomas Adams on "Planning a Seaside Town." Caxton Hall, S.W.1. 6 p.m.

Saturday, June 25.

Royal Institute of British Architects (Camera Club). A photographic outing to Regent's Park. 2.15 p.m.

Tuesday, June 28.

Ecclesiological Society. Commemoration Service in St. Paul's Cathedral. 6 p.m.

London Society. Visit to the Church of St. Dunstan, Cranford, and Heston Airport. Depart Lancaster House, 2 p.m.

Wednesday, June 29.

Architects' Registration Council. Council Meeting. 66, Portland-place, W.1. 5 p.m.

Royal Society of Arts. One-hundred-and-eighty-fourth Annual General Meeting. 4 p.m.

Thursday, June 30.

National Federation of Building Trades Operatives. Dinner on the occasion of the 21st Annual Conference. Queen's Hotel, Hastings. 7.30 p.m.

Institution of Electrical Engineers. Conversazione. Natural History Museum, S.W.7.

Housing Centre. Third Annual General Meeting. 5 p.m.

Friday-Monday, July 1-4.

Association of Architects, Surveyors and Technical Assistants. Visit to the Empire Exhibition, Glasgow.

Friday-Saturday, July 1-23.

Liverpool University. Annual Exhibition of the Work of Students of the School of Architecture. To be opened on Friday, July 1, by the Rt. Hon. Lord Allen of Hurtwood. 3.30 p.m.

Saturday, July 2.

Royal Institute of British Architects. Visit to London University Buildings. Mr. Charles Holden will conduct the party. 2.30 p.m.

THE TOWER OF THE UNIVERSITY OF BRISTOL.

A pencil and wash drawing, by Mr. A. C. Fare, R.W.A., A.R.I.B.A., of the Tower of the University of Bristol, designed by Sir George Oatley. On the left is seen the Bristol Museum and Art Gallery. These buildings will be among those seen by members of the British Architects' Conference, which meets at Bristol this week.

TOPICS OF THE DAY

THE BRISTOL CONFERENCE.

BRITISH architects are again in conference—this year at Bristol, by invitation of the Wessex Society. In accordance with our usual practice, we are devoting two issues to the meeting, the present being the second, in which we give reports of the three addresses read yesterday morning in the Victoria Rooms, as well as illustrations of current and other work in Bristol and Bath.

Following a reception at the Red Lodge on Wednesday evening, the Conference opened officially on Thursday morning, when the President, Mr. H. S. Goodhart-Rendel, delivered an excellent Inaugural Address, in which he touched lightly but constructively upon a variety of topics of architectural interest. Perhaps the most notable part of his address was that in which he appealed for greater collaboration, where necessary, between the architect and the engineer. Special point was lent to this appeal by the President's reference to a method of liaison discussed by the President of the Institution of Civil Engineers and himself in connection with the study of air raid precautions. Deplorable as the need for such preparations may be, it will at least have achieved something of benefit to humanity if it succeeds in bringing the architect and the engineer into some permanent collaborative relationship, not merely confined to preparations against air attack, but fully applied to the development of the arts of peace.

The architectural charm and scenic beauty of "the two counties over whose boundary Bristol is built" gave special point to the President's strictures upon the spoliation of the countryside and the destruction of old cottages. Fortunately there are indications of the arrest of these deplorable tendencies in many parts of the country, particularly with regard to old cottages, many of which are to-day being reconditioned and preserved in their integrity. In this connection, and also with regard to the addition of new buildings to old villages, the remarks of the President were particularly apt.

Further mental stimulus was provided at the Inaugural Meeting by two excellent papers, by Mr. J. E. Barton and Mr. Berry Webber respectively, the former exploring the philosophical and the latter some of the practical aspects of architecture.

Visits in and around Bristol and Bath yesterday (when a reception was held in the evening by the Lord Mayor) are being followed to-day (Friday) by tours through the surrounding countryside, and the Conference banquet in the evening. Already the Conference is an established success, for which the President and Council of the Wessex Society deserve and will receive the cordial thanks of all who have had the pleasure of taking part in it.

THE R.I.B.A. COUNCIL.

THE result of the R.I.B.A. Council Elections, given on page 1240, shows that members have made, generally speaking, an excellent choice which should go far to satisfy the various interests within the Institute fold. The names show that while many of the members who were on last year's Council have secured re-election, there has been a sufficient turnover to permit that entry of fresh blood which is essential to the well-being of any council.

In view of the recent correspondence in our columns from supporters of the salaried and official architects groups, it is interesting to note that the lists show that whereas there was but one freely-elected architect from these groups in last year's Council, no fewer than four have this year secured election—Messrs. A. C. Bunch, G. Noel Hill, E. P. Wheeler and S. A. Heaps. No representative of the A.A.S.T.A. secured election, though Professor Holford—who, while not a member, being ineligible, was one of four nominated for A.A.S.T.A. support—has been elected as an Associate Member. The A.A.S.T.A. have, of course, the additional representation by one member to which they are constitutionally entitled, and as a representative of the Salaried Members' Committee will, for the first time, be eligible to sit on the Council, the interests of the younger salaried architects and assistants should be adequately represented.

This year's Council, in fact, more nearly than ever before approaches the ideal of balanced representation. With moderation and good-will practised by all parties we may hope to see many, if not all, of the difficulties and grievances, which are now common knowledge, "ironed out" during this Council's period of office, to the lasting benefit of individual members and of the art which every architect serves.

TOWARDS A PLANNED BUILDING PROGRAMME

THE May building figures, given elsewhere in this issue, show that the decline noticed in figures of value of estimated future building for the first four months of this year has been arrested, at all events temporarily. We welcome this development as showing that public confidence is hardening as fears of Continental unrest diminish, and trust that this tendency may be continued.

At the same time, indications over the last fourteen months show that we are not justified in believing that the building curve is still on the up-grade generally; industrial building work, as well as housing, is lagging behind previous high levels; and while we do not, as we have said before, anticipate any sudden decline in work available, a charge of shortsightedness will lie at the door of the building industry unless every section of it, and every responsible individual in those sections, throws its or his weight into the unified endeavour to obtain a planned programme of building.

The steps being taken to achieve this end have already been referred to in these columns. The aim, in brief, is to secure a planned, spaced output of official building work, and signs are present that this ideal may shortly be achieved. The efforts that are being made will, without doubt, lose momentum unless a united, solid front—formed of every section of the industry—is presented. Particularly needed in this direction is an increased measure of support from the materials manufacturers, the importance of whose influence in the building world (due to the vast amount of capital they control) is matched only by the benefits which they would stand to gain by stabilisation of demand.

Without some form of stabilisation such as that proposed, the building industry may always stand to be adversely affected by international disaffections, whereas, with a workable plan, there are means within our grasp of confining the rise and fall within reasonable limits. Such a plan, if implemented by the building industry, might indeed give a lead to other basic industries. It is for every person in the building trade to help, by the particular means in his power, in securing the object in view.

NOTES AND NEWS

Flamborough Head: Proposed Development.

MUCH concern is being felt at the news that a large portion of land on Flamborough Head, Yorkshire, may be sold for development as a housing estate. The matter has been taken up by the York and East Yorks Architectural Society, whose President (Mr. S. W. Needham) has called upon the local authorities—and especially the East Riding County Council—to exercise their powers under the Town and Country Planning Act. "If the building operations," says Mr. Needham, "were restricted to approved areas out of sight of the cliff edge but within a reasonable distance of it, the natural beauties would still be left to residents on the new estate and the public at large. With proper control and skilled advice as to siting, lay-out and design of the buildings there is no reason," states Mr. Needham, "why this threatened catastrophe should not turn out to be an asset to the neighbourhood."

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The Eclectic Art Society Exhibition.

THE Eclectic Art Society is holding its sixth exhibition of members' work at the Arlington Gallery, 22, Old Bond-street. The exhibits embrace a variety of subjects, including old buildings, landscape, flowers, etc. Amongst the old buildings is "Kentish Oast House" (No. 91), by Miss Juliet Somers. This is a weather-boarded and tiled-roof building, a picturesque subject strongly drawn, and the colour conveys its material well. This artist also exhibits "Bella Donna," a strongly painted and well-drawn head (No. 36). "Tithe Barn, Lenham" (No. 13), an interior by Miss Christine Hancock, is effectively placed on record, with its strong light and shade—a good impression of a type of building which is slowly but surely passing away, for the price of its old oak and tiles, now so often advertised for clearance. Amongst the flower pictures, "Yellow Chrysanthemums" (No. 16), by Mrs. Henrietta Goldie, is a direct piece of painting showing a mastery of the subject. "Zinnias" (No. 122), by Miss Julia Fielding, is a colourful subject, fully recognised by the artist. Nos. 111 and 112 are paintings entitled "A Doubtful Bargain" and "Better Times Coming," by Charles Spencelayh, whose work is well known for its high finish and depth. No. 112 is entitled "A Doubtful Bargain," a collector studying his latest acquisition with some doubt: the bargain a brass musical instrument. The pictures hanging on the wall of the interior are easily recognisable as familiar subjects. Many other works of interest are to be seen, as well as a few pieces of sculpture. The exhibition is open until June 30.

Tudor Houses in Norwich: Restoration Completed.

EIGHT Tudor houses in Oak-street, Norwich, which have been restored by the Norwich Amenities Society, were officially opened on June 14. The houses form one of the most typical and complete examples of Tudor architecture in Norwich, and were built in or before Queen Elizabeth's reign. The top storeys were added about the time of Cromwell.

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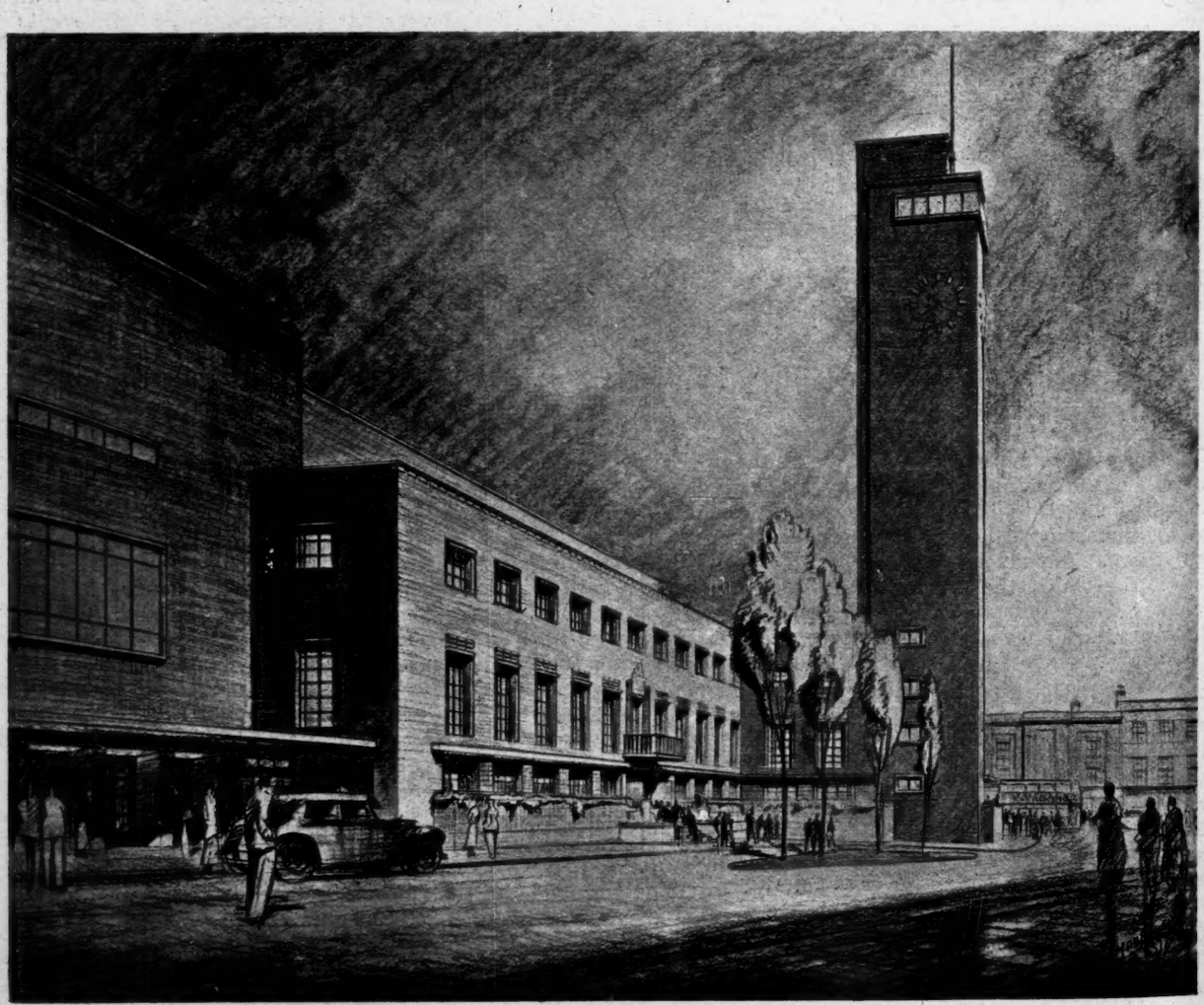
Location of Industry: Garden Cities Association's Opinion.

IN a memorandum presented as evidence to the Royal Commission on the Geographical Distribution of Industrial Population, the Garden Cities and Town Planning Association pointed out that in the larger towns the need of further central accommodation was being allowed to grow, while already it was impossible to provide for present needs. In the County of London the area devoted to industry (excluding docks) had been allowed to increase, and there was reason to believe that a continuance of that trend was allowed for in the L.C.C. Town Planning Scheme, though the L.C.C. admitted that Greater London was too large. masses of specially bad dwellings were characteristic of the centres of overgrown cities, and it was beyond the means of the richest town unaided to clear and rebuild its own slums, even if it rehoused the slum dwellers at densities of 40, 60,



J. D. M. Harvey, *delt.*

NEW TOWN HALL AND MUNICIPAL OFFICES, GREENWICH.

This drawing shows the main elevation and tower of these buildings, the foundation stone of which was laid on Saturday last. The architects are MESSRS. CULPIN AND SON, F. and A.R.I.B.A.

or 80 dwellings to the acre. The need for State subsidies granted for block dwellings in the large towns was the result of a long-continued uneconomic and disastrous form of city growth. State policy, instead of controlling the trend towards bigger towns, had followed, facilitated and reinforced it in innumerable ways.

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Clearance Areas in Swansea: A Town Planning Consultant Appointed.

In connection with the redevelopment of clearance areas in the High-street and Greenhill district of Swansea, the Joint Highways and Housing Committee of the Corporation have recommended that Mr. Barry Parker, F.R.I.B.A., P.-P.T.P.I., be appointed to advise upon the subject. The appointment has been confirmed.

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Rome Scholarship in Architecture: Exhibition of Final Competition Designs.

The designs submitted in the final competition for the Rome Scholarship in Architecture will be on exhibition at the R.I.B.A., 66, Portland-place, W.1, between 10 a.m. and 8 p.m. (Saturday, 10 a.m. and 5 p.m.), from July 5 to 9, inclusive.

This year the subject for the competition was "A Play Park." Thirteen students from the following schools were admitted to the competition: The School of Architecture, Cambridge University; the Welsh School of Architecture, the Technical College, Cardiff; the School of Architecture, Edinburgh College of Art; the Liverpool School of Architecture, University of Liverpool; the Bartlett School of Architecture, University of London; the School of Architecture, the Victoria University, Manchester; the School of Architecture, King's College, University of Durham, Newcastle-upon-Tyne; the Department of Architecture, University of Sheffield.

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A Municipal Appointment, Felling-on-Tyne.

Felling-on-Tyne Urban Council has appointed Mr. H. Fawcett, Housing Architect, to the post of Surveyor, in succession to the late Mr. C. W. Hall.

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A Housing Programme, Ulster.

Considerable building activity is predicted in Northern Ireland as a result of the Government's latest housing proposals. These provide for substantial State aid for the clearing of unhealthy areas, and for a contribution equal to one-third of the cost of each new house erected, subject to a maximum of £150, from the local authorities. Normally rents will not exceed 3s. 6d. per week, but where for special reasons the average cost of each house is more than £450 it is suggested that the Ministry of Home Affairs should have power to authorise rents up to 5s. 6d. per week free of rates. The increase permitted over 3s. 6d. per week will be limited to the amount required to recoup the rates for the amount over £450, and it will be subject to consideration of the financial ability of the prospective tenant to pay.

It is also proposed that public utility societies formed for the building of working-class houses should receive a contribution of the same amount as would be payable to local authorities, but there will be more latitude as to the rents to be charged.

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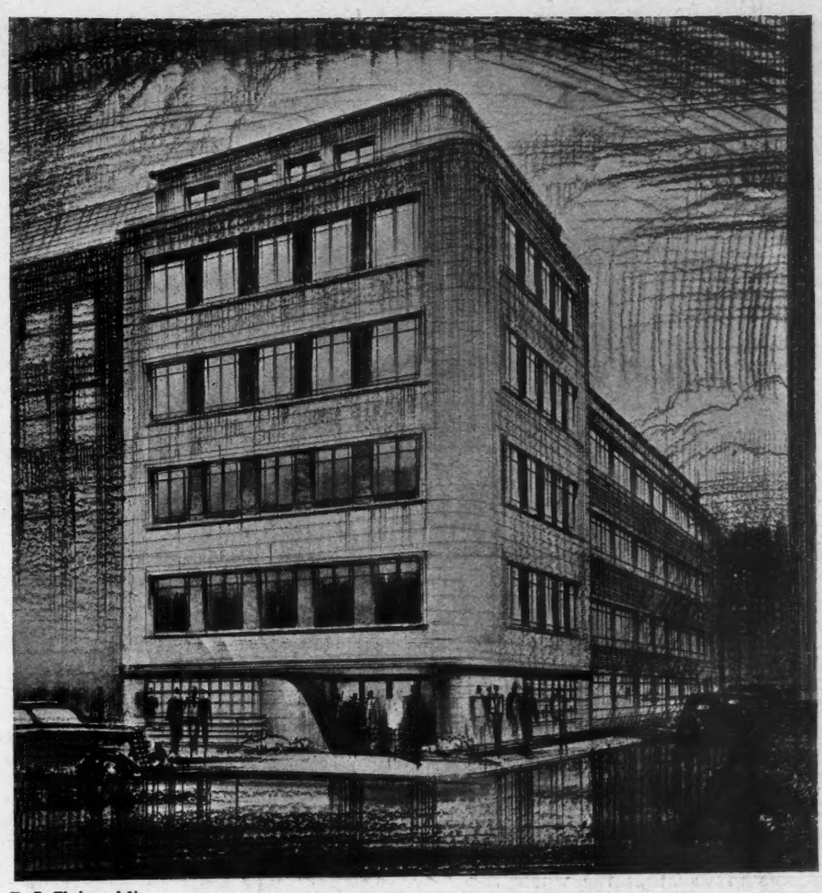
An Architect's Estate.

Mr. Charles Edward Fox, F.R.I.B.A., of Halifax, left gross estate of £13,144, with net personalty £10,749.



E. J. Thring, *delt.*

"ROTHWELL HOUSE," LANGHAM STREET, W.

Here shown is the design for a new block of offices at Langham-street and Portland-place, for which MESSRS. MARSHALL AND TWEEDY, FF.R.I.B.A., are architects.

All Hallows Church, Lombard-street: New Site at Twickenham.

A district hitherto known as St. Martin's, Twickenham, has been selected as the new All Hallows in which the church to be erected as the successor-church of All Hallows, Lombard-street, is to be built. The site is situated on the new Chertsey-road, and the furniture and fittings of the old All Hallows will be preserved in the new church, which is to be designed by Mr. Robert Atkinson, F.R.I.B.A. The Ecclesiastical Commissioners have been advised by Mr. Goodhart-Rendel, P.R.I.B.A., Mr. H. M. Fletcher, F.R.I.B.A., and Mr. Edward Maufe, A.R.A., F.R.I.B.A., not only with regard to the fittings from All Hallows, but also with regard to the site of the new church and the appointment of an architect, and it is on the unanimous recommendation of these architects that the site at Twickenham has been chosen.

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R.I.B.A. News.

End of the Session.—The Session 1937-38 ends officially on June 30. Under the new by-laws the Art, Practice and Science Committees will cease to be "standing," and in common with other Committees, will be appointed by the Council. The old Literature Standing Committee will cease to exist, part of its work being carried on by a new Library Committee. The new Council will meet to appoint the Committees on July 18.

Rome Scholarship Exhibition.—The designs submitted in the final of the Rome Scholarship in Architecture will be on view at the R.I.B.A. from July 5 to 9 (10 a.m. to 8 p.m.; Saturday, 5 p.m.). The subject this year is "A Play Park"; the Rome Faculty meet to make the final award on Friday, July 1.

Presentation to the Library.—The R.I.B.A., which already possesses the most interesting collection of Lethaby's architectural drawings, has now been presented by Miss Crosby, Lethaby's sister-in-law, with a number of his notebooks and sketch books dating from 1875 to near the year of his death.

Exhibitions.—"Health, Sport and Fitness" opens at the Manchester City Art Gallery on July 4; "Airports and Airways" opens at the Sunderland Public Library and Art Gallery on July 1.

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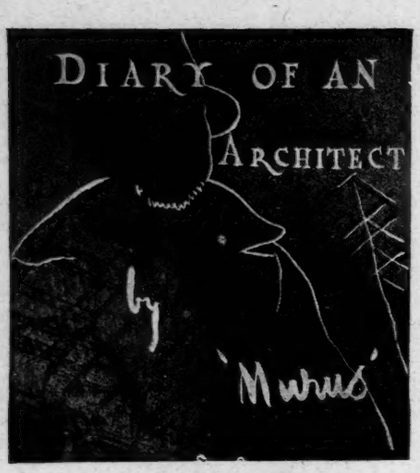
Professional Announcements.

Mr. Eric N. Smallwood, L.R.I.B.A., has changed his address from 46, Farm-road, Edgware, Middlesex, to "Haseldene," Oaks-crescent, Wolverhampton. Telephone: Wolverhampton 21178.

Mr. Basil C. Deacon, F.R.I.B.A., has changed his address from 33, King-street, Luton, Beds, to the Electricity Showroom Building, 85, George-street, Luton, Beds. The telephone number remains as at present: Luton 168.

Mr. H. G. Goddard, M.A., A.R.I.B.A., has moved his office from 6, Radnor-place, to 37c, Connaught-street, W.2. Telephone number remains Paddington 5605.

Mr. J. H. Langtry-Langton, A.I.A.S., M.Inst.R.A., has recently commenced to practise at Central Chambers, 2, Cheapside, Bradford, and will be pleased to receive catalogues at that address.



ARCHITECTURAL DRAWING.

June 20.—This business of architectural drawing which I mentioned last week intrigues me sufficiently to delve further into the possibilities of architectural presentation. At the moment there seems to be no definite standard of presenting a building such as existed in previous periods, and the negative quality of the contemporary architectural draughtsman would appear to me to be much more negative than has previously existed.

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I once wrote a book on the subject of architectural drawing. I found it very difficult to avoid making sweeping statements about the single subject of what is an architectural drawing. The conclusion I came to was that the whole could be divided into three forms: Topographical, objective and subjective drawings. The topographical drawing is a delineation of an existing scene with an eye to the accuracy of its presentation. Objective drawing is a method of reducing a proposed structure down to a set of symbols, and is best illustrated by our present working drawing with its plan, section and elevation. The subjective drawing is an attempt to project on to one plane the three-dimensional quality of the structure as it would appear to the eye when built, and it is with this form of drawing that perspective art is concerned.

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This in itself is only a use of symbols. Of course, it is fairly obvious that the principle or theory of perspective is a very different thing from the eye recording an image and transmitting it to the mind. Without being too verbose about the reasons for this phenomenon, it does stand out clearly that the eye in recording an image is controlled entirely by the mind and the experiences the mind has gone through. In other words, to look at a building with the eye is tantamount to asking the mind to recall its experiences of all such other buildings and to bring such knowledge to bear as will help one to absorb the scene completely.

The perspective drawing must of necessity reduce the building to a geometric theory, and such experience as the draughtsman has had may be imbued in the drawing to create a perfect illusion. The question of æsthetics does not enter to any extent into the problem of this kind of drawing. The spirit of a non-existent scene is subsidiary to the desire of recording what is to be built in a purely topographical way, much as a map might record a landscape without imposing any æsthetic understanding on to it.

It is for this reason that the perspective drawing can never achieve the standard of a work of art, and it is in the confusion of these two aims that contemporary perspective drawing appears to have "missed the boat."

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The very early drawings which one got in the Gothic period did not even attempt to make pictorial a drawing which was considered to be practical, and even in the heyday of architectural drawing in France in the 18th century there was a strong tendency to formalise the subjects rather than create a picture.

Such men as JACQUES FRANCOIS BLONDEL and CHARLES LOUIS CLERISSEAU produced drawings of the French chateaux which have never been quite equalled, and at the same time ANTONIO CANALE (CANALETTO) and FRANCESCO GUARDI were producing architectural paintings, mostly topographical, in Italy, that still remain as the finest achievements of this kind.

In England, PAUL SANDBY and THOMAS MALTON were showing in their drawings an ability to delineate an architectural scene with a conviction that leaves the 19th and 20th centuries as utterly confused.

I have often wondered why it is that the draughtsmen of this century do not return to the 18th-century methods as being by far and away the best for the pure purpose of architectural drawing. Apart from the 18th-century idea of formal drawing, there was a strong feeling of working in reproductive processes, and such mediums as etching and, later, colour lithography were used to make possible a number of prints from an original. In fact, a good number of these drawings now exist in book form, and serve as an excellent record of the architectural scenes. Some of these books, such as BLONDEL'S "Architecture François," COLIN CAMPBELL'S "Vitruvius Britannicus," and SOUFFLOT'S "Paestum" are remarkable gems of architectural drawing, and together with WENCESLAUS HOLLAR'S collected etchings lay down a standard of drawing which would be well worth while for contemporary draughtsmen to study. Nowadays there is that insistence on producing one original water-colour for perspective, which is usually hawked around from one interested party to another. It is usually rather large and clumsy for such purposes. It is true that a photograph might be taken of the drawing; it is also true that this is very rarely done. The result is that there is a great deal of unnecessary trouble, and the usual business of those who pay for the drawing keeping it. In black and white and colour lithography, in etching and in engraving there is a possibility of producing unlimited copies of the original, and it would appear at first glance worth the trouble of doing these things in order that all the interested people may at least possess a copy of the proposed building.

I myself have attempted to overcome the problem by having the "set-up" of the building drawn out on tracing linen and prints taken on various kinds of drawing-paper. It serves a dual purpose of having the possibility of unlimited prints for general use, but much more important is the fact that a second rendering can be attempted without the tedious business of a completely new set up. Curiously enough, I find that very few architects make use of the set-up print in its unrendered form, and I also find that most draughtsmen do not like painting in water-colour on the very hard and firm printed line which one gets from an ink negative.

The question of water-colour and papers is really more difficult. Certain water-colours have an earthy deposit which makes a clean rendering almost impossible; such colours as Burnt Umber are very difficult to use properly. On the other hand, you get such clear colours as Prussian Blue, which are supposed to be impermanent. I, personally, use a palette of Prussian Blue, Sepia, Payne's Grey, Burnt Sienna, Raw Sienna, Gamboge, and Alizarin Crimson. This range of colours seems to cover most of the work I do; and if White is added to the colours it very often results in a very much more subtle range than is possible in the pure water-colours.

There is one colour which I use for monochrome drawings, which in the 18th century was very popular, and which has almost gone out of existence now. It is called Bistre, and was used a great deal in the pen-and-wash drawings of about 200 years ago. It is a lovely warm colour, slightly warmer than Sepia.

One often comes across two colours which combine perfectly, and on the combination of two colours it is frequently possible to render a drawing. Prussian Blue and Burnt Sienna is one such combination; Payne's Grey and Bistre is another. A third one is Sepia and Prussian Blue.

The kind of brush depends very much on the type of work, but after using sable brushes for a number of years I have come to the conclusion that the small Japanese brush is a much better thing to use after application of the bigger washes. It is possible to draw with these brushes in a much more fluid way than can be done with pencil; and, in fact, all the drawing, apart from the actual building, can be done with these brushes.

Papers are a further problem, and the frequently large size of architectural renderings makes the choice of paper very limited. There is the rather obvious choice of Whatman; but much the best kind of Whatman is called Creswick, and is a rather pleasant cream colour. The Italian paper Fabriano has rather more character in it than Whatman, and can be obtained up to double-elephant size. Among the smaller papers, apart from the well-known R.W.S. and Arnold varieties, are two papers which have a lovely range of colours, which can be used as the background for a rendering. One of these is called Ingres, and the other is called Michelet. It is perfectly simple to do a perspective on these papers by drawing the set-up in carbon pencil and the rendering in a monochrome like Bistre and Black. They are rather delicate papers, and it is not possible to rub out. Also such coloured papers are not good for colour reproduction. David Cox paper is another rather delicate surfaced one, but it is possible to obtain results on it much more easily than with the white china surface of Whatman.

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The whole question of water-colour rendering requires a great deal of research, because it is well known that the early English water-colour painters had a much fuller range of materials in the way of colours and papers at hand than we have at the present day. The colours were much clearer and purer, and the papers were made from much better material. If you look at the water-colour drawings of JOHN SELL COTMAN, his pure quality stands out as something which cannot be accomplished to-day.

Mnrus

THE BRITISH ARCHITECTS' CONFERENCE, BRISTOL

PRESIDENT'S INAUGURAL ADDRESS.

MR. GODHART-RENDEL, P.R.I.B.A., gave his inaugural address at the British Architects' Conference, Bristol, on Thursday.

After some introductory remarks, in which he emphasised the difference between utilitarian building and architectural building, the speaker asked: "How is architecture faring to-day? We remember how post-war neurasthenia plunged us for a time into a theoretical negation of all architectural art whatsoever. Houses were to be machines to live in, offices machines to work in, restaurants machines to be fed in, theatres, I suppose, machines to be amused in. From this emotional condition we have two immediate legacies, one bad and one good. The bad legacy is a disregard for what is emotionally appropriate. With a complete disregard of good manners and urbanity, people leave their living and their working-machines about in places where their appearance is most incongruous, tossing a great living machine into an elegant district with a nonchalance the same people no doubt would display in dumping a box of motor tools on their sitting-room sofa. . . .

"The good legacy is that these internal troubles have been eased, that the tight stays of Edwardian stylism have been loosened and planning has not been denied its full natural development. In fact these buildings are often quite good foundations for architecture, not foundations to which architecture could be applied, because architecture is not an applied art, but beginnings that might have been brought to architectural conclusions.

"Unfortunately, however, the fashion which gave them their birth has left us a third legacy, less direct but more ominous than those of which I have spoken. This legacy is a break in the traditional competence of architects to produce architecture. Some of the exaggeratedly utilitarian designing in all countries has been done by men who know a great deal more than they have chosen to show in it. On the other hand, much of it has been produced by a new generation whose powers are limited by the crudities it has never got beyond. In the general movement back to architecture which is taking place in the Continent of Europe, very many men must lag behind who, if their architectural sensitiveness had been sharpened by any proper training, should have been able to acquit themselves well. Unfortunately, their attitude of revolt from the past (in itself as good an attitude for an artist as any other) has been made ineffective by their ignorance of the past from which they are revolting. They have not so much fallen into new errors as into old errors of whose previous commission they have been ignorant.

"In condemning styles they have seen no deeper than style, and have become inconscient slaves of their own styleless stylism. If any candid and unprejudiced person will look through the pages of the old building papers, he will see that, alike in the work that is good, that which is indifferent, and in that which is bad, a great deal of human zest has lately gone out of architecture. Not that against this loss we may not balance a great and an encouraging gain. Before the War, the plans of British buildings, other than domestic, were a by-word for vagueness and unskilfulness, whereas now our planning is little, if at all, inferior to that of any other European nation excepting France."

Architectural and Engineering Collaboration.

Continuing, the speaker said that planning, as everyone knew, was controlled as much by the needs of structure as by those of spatial arrangements, and until their engineering became more elastic and resourceful than it was at present their new skill in the disposition of space could hardly make its full effect. This was one of the unhappy consequences of the separation between engineering and architecture that in England was barely two centuries old. In large undertakings architectural and engineering collaboration from the outset seemed essential, and in small undertakings, he believed that it would be best ideally that an architect and an engineer working in partnership should become the normal unit in the designing service of the nation. But, putting aside the danger of friction, there was obviously a public disadvantage in the overlapping of the special provinces of the architect and of the engineer.

An example of that was what might be happening to-day in the study of air raid precautions if their friends the civil engineers had not, with great foresight, taken steps to prevent it. The President of the Institution of Civil Engineers and the speaker had discussed a method of liaison which, if adopted by the societies they represented, should avoid the danger of the same investigations being made twice over. Their recent conference to discuss air raid precautions in London was a step they were proud to have taken, and those who heard or who had subsequently read the Home Secretary's speech on the opening night would realise the very great responsibility the Government had laid upon them by asking the Royal Institute of British Architects to instruct the public in building for defence. As with their architectural exhibitions, the beginning made by that Conference at their headquarters was intended to be a beginning only of efforts that with the help of the allied societies might spread all over the country.

Another way in which they were called to serve their country in this emergency was in the design of military buildings required for defence. In this, as they all knew, architectural services, whether departmental or external, were now almost invariably employed. In spite of a hampering routine that in the present emergency it might well be impracticable to modify, most of that work was being done very much better than such work was done formerly; and he should like to record with gratitude the extremely happy relations which their sense of common duty had enabled the Royal Institute of British Architects to establish with the War Office and the Territorial Army.

The speaker went on to say: "The last subject that in these remarks I propose to touch upon is one so much discussed already that, were I speaking anywhere else but in Bristol, I might be tempted to leave it alone. Yet, if I have spoken of buildings for defence, is it not appropriate that I should speak also of buildings to be defended? Not of buildings only, but of the English scene in which they are placed. The English scene that has no greater glory than those of the two counties over whose boundary Bristol is built.

"The miscarriage of well-meant legislation has brought to this scene new dangers, of which at last the public is becoming aware; and it can be hoped that within the next few years the policy will cease altogether from destroying comfortable cottages that are unfashionable sanitarily and putting in their place houses that few can want—and fewer still can afford—to live in. The social aspect of housing has been, and still is, presented too much by doctrinaires, by people too deeply immersed in their own theories to emerge and examine dispassionately what the people to be housed can tell us themselves of their needs and likes. In consequence, a very great many people have been made poorer and unhappier by expensive enterprises intended to improve their lot, and reforming politicians wonder why they are not quite so popular as they think they ought to be.

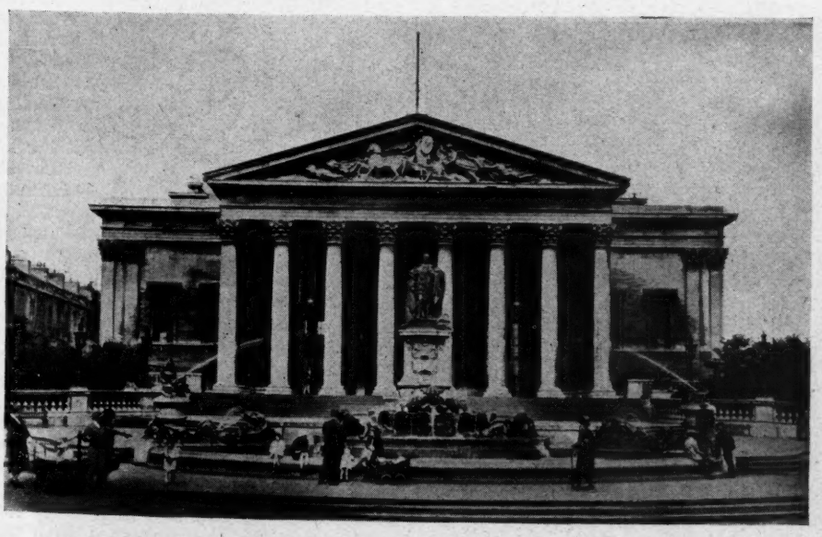
Building in an old Village.

"I doubt if there is any more difficult or responsible task for an architect than building in an old village, but the observation of two rules will, I think, keep us out of a great deal of trouble. The first is—build nothing new to look old, never dare to complicate the currency by issuing false coin; the second is—never put back anything in an old building to what it may have been but is no longer. Possibly I might add a third—choose your materials to harmonise with the old materials round about, but not to make a bad match. In doing this, you will remember that harmony in music includes discord, and without it is like an egg without salt.

"A bit of Victorianism or a bit of Edwardianism or even a bit of modernism, cannot harm any robust village if the Victorianism, the Edwardianism or the modernism be naked and unashamed. Unfortunately, Victorianism and Edwardianism was much apt to be ashamed, and to hide its nakedness in garments from the historical costumiers. Nobody would accuse modernism of shame, but its self-assertiveness often makes it unpleasant in any surroundings, old or new. Time, however, if it does not demolish will soften it, and if we allow modern motor cars to fill our streets, it seems to be unreasonable to forbid a modern building to take its station in them. Often the garage with its petrol pumps makes a really valuable link æsthetically between the old house next to it and the motor cars that are constantly passing both of them. People who thatch petrol pumps ought to put leaded glazing into their windscreens."

In conclusion the speaker made an earnest appeal for subscriptions to the Architects' Benevolent Society.

(Further proceedings reported on page 1240.)

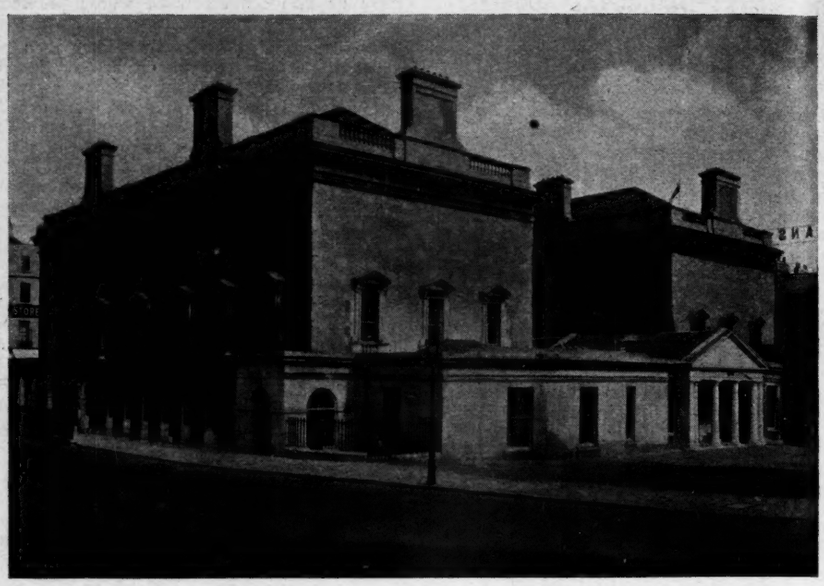


THE VICTORIA ROOMS, BRISTOL. CHARLES DYER, ARCHITECT (1842).

These rooms are the headquarters of the British Architects' Conference, now being held. The fountain and forecourt were laid out in 1911, from designs by Messrs. Lanchester and Rickards.

THE ASSEMBLY ROOMS, BATH

SOME NOTES ON ITS HISTORY AND ALTERATIONS.



VIEW FROM NORTH-WEST.

THESE assembly rooms are called the New or Upper Rooms, as opposed to the Lower Rooms on the Terrace-walk. They occupy a site of nearly ¾-acre, and the first stone was laid by the younger Wood on May 24, 1769, and the building was erected with capital subscribed in 70 shares of £300 each. The work was finished in October, 1771. The first master of ceremonies was Captain Wade, who had been at the Lower Rooms on the Terrace-walk.

On the south side the elevation is divided into three storeys. Five of the first-floor windows give light to the Concert or Tea-room. There are fine chimney stacks still remaining.

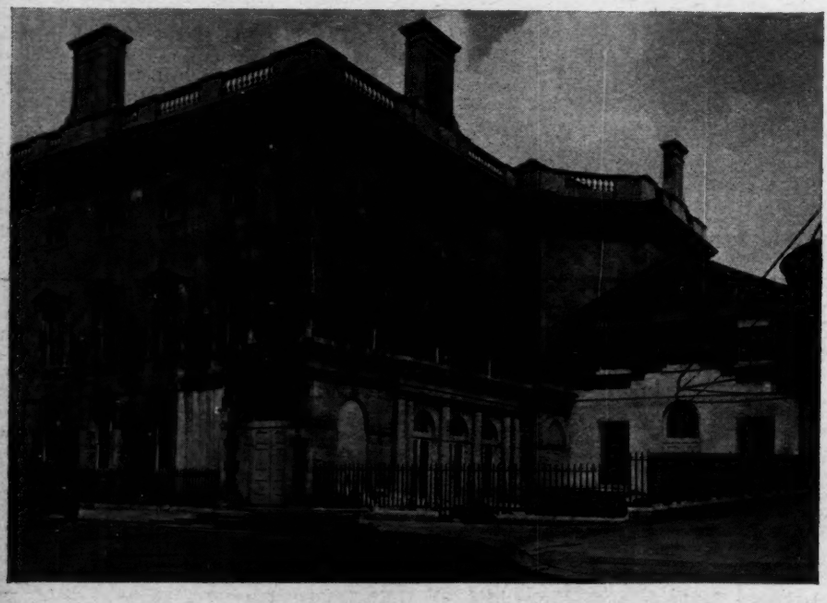
The north side towards Bennett-street is shown in Nattes's view of 1805, where the low range of shops is built in the form of a Doric colonnade with a carriage entrance at the north-west corner. The principal entrance was on the west side, and was used for sedan chairs. Bennett-street is now much higher than before, so that the pavement at the upper side is 3 ft. 6 in. higher than it used to be. The whole of the northern block is occupied by the Ballroom. The planning is simple and well arranged. From the west end one passes into a vestibule, which runs right across the building from Bennett-street on the north to Alfred-street on the south. From the centre of this vestibule an outer hall leads past the entrances to the cloak-rooms and on to the small octagonal hall in the centre of the building. To the left is the entrance to what has been known as the large Assembly, Concert or Ball-room; to the right is the small Assembly, Concert or Tea-room. Immediately in front is the Octagon, and, beyond, the Card Room. The looking-glasses with their ornaments in the Octagonal Hall are of the same date as the building, but were not in this position originally.

The Ballroom is 104 ft. 3 in. long, 41 ft. 6 in. wide, and 42 ft. 6 in. high, and in its altitude is divided into three parts. The substructure, which has a dado 4 ft. high, is of a total height of 15 ft. The middle division of the room has a range of three-quarter wooden Corinthian columns, 11 ft. 8 in. high, with stone bases, and between them three windows at each end and seven on the north side. This colonnade and the substructure of timber work which supports it is detached from the main wall so as to admit of the windows being provided with rising and falling shutters, painted with figures and other subjects, for use during the balls, which, in the 18th century, were often held in the daytime. The third division of the room is occupied by an immense cove, 11 ft. 6 in. high, and above is a flat ceiling with five panels; from the central ornament in each of these hang fine old cut-glass chandeliers. In the middle of the south side is the apsidal orchestra, 21 ft. wide, the semi-dome of which intersects with the cove at its full height. A lithograph by Hollway, of about 1840, shows the old mahogany "rout seats" in use in this room.

The Octagon, 47 ft. 6 in. in diameter, connects the Ballroom and the Tea-room, and has fireplaces on four sides. Up to about thirty years ago the picture of Captain Wade hung upon the south wall here. It was painted by Gainsborough, and was exhibited at the Royal Academy in 1771. There was also one of Richard Tyson, painted by G. James, 1788. Tyson retired in 1805 after twenty years of office. The medallion which in 1769 was given as a badge of office to Captain Wade at the Lower Rooms has been lost. Cruttwell in his guide of 1777 says that it was made of fine gold, enamelled blue, and elegantly enriched with brilliants.

East of the Octagon lies the Card Room, 70 ft. by 26 ft. 6 in. It appears to be an addition to the earlier buildings, and is seen on Masters's map of 1794. It was here that the card party of the Pickwick Papers took place, when Mr. Winkle was chased round the Crescent by Major Dowler.

The smaller Assembly or Tea-room is 66 ft. 6 in. long (including the part behind the colonnade), by 41 ft. 6 in. wide and 42 ft. 6 in. high. There is a view of it in Nattes, 1805, though the cove is shown too flat. Like the Ballroom it is divided in its height into three distinct parts, and it has one fireplace in the north wall, one in the east, and two in the south wall. At the west end the orchestral gallery runs the whole width of the room, and is supported on six Ionic stone columns, 11 ft. 6 in. high. Under the three middle arches at the back of this colonnade was the bar, and here tea and refreshments were served. Detached Corinthian columns stand above the Ionic ones, as in the Ballroom, and the order is continued round the room as an engaged colonnade of three-quarter columns, and here they are set in wide couples, each column flanking a window. The shafts of the columns are of stone, but the foliation is of plaster, as are also the other enrichments round the room, including those in the panelling of the window jambs, though the jambs and mouldings are worked in stone. Between the columns of the gallery is some good ironwork of the period. Above the Corinthian order is a panelled attic storey from which springs the great cove with very bold ribs ornamented with foliation and intersecting each other on the flat of the ceiling. In 1813 a Reading-room, now



VIEW FROM SOUTH-EAST.

called the Club Room, was added at the south-west angle of the building.

The Scheme of Redecoration.

These rooms have now been redecorated throughout in a soft beige colour with gold leaf enrichments, to designs by Messrs. Mowbray Green and Hollier, F. and L.R.I.B.A.

The 19th-century cast-iron railing across the semi-circular Minstrels' Gallery in the Ballroom has been replaced by a new wrought-iron one. In connection with this room, the Northern Colonnade, which for a very long period had been used as licensed premises, is now being returned to its original use as a lounge in connection with the Ballroom, the portion at the east end being made into a washing-up pantry for use when banquets are held here. The north-west and north-east porticoes have also been restored, and now stand out from the building as originally designed.

A good deal of modern work has been taken down at the north-east corner, and a small retiring-room has been made here.

The corridor at the south-east corner of the building, which serves as a separate entrance to the Card Room, has been largely rebuilt with three new arches with doors opening on to the space outside, which was formerly covered by a large conservatory, and here again the portico has been restored. The emergency doors from the Card Room also open on to this space. This room has been restored as far as possible to its original condition. The lighting will be by concealed strip lighting above the cornice.

The large emergency exit, which was formed in the south side of the Tea-room many years ago, has now been walled up and the inside restored, while two emergency doors have been made at the east end. The walls here have had the panelling restored—almost, it is believed, as in the original design. This room has the original wrought-iron grille between the columns and the Minstrels' Gallery. The space west of the Colonnade in this room is fitted as a tea and coffee buffet. The Minstrels' Gallery originally designed for the Octagon, which had been closed up, has been reopened, and a new wrought-iron grille has been placed across it.

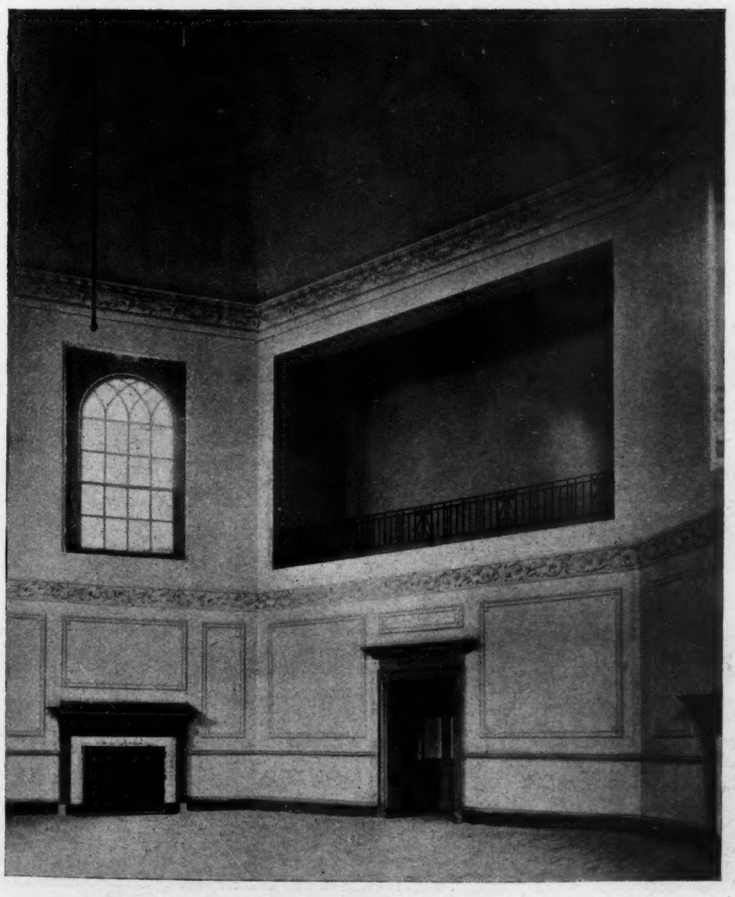
THE TEA-ROOM.

The old billiard rooms at the north-west corner of the building have been equipped as a complete service kitchen, the installation being heated by gas. The Club Room at the south-west corner has its own entrance on the south, and has been renovated, with two new windows on the west side. The ladies' cloakrooms, which are on the ground floor, are approached from just within the main entrance, and are fitted up with lavatory accommodation. The men's cloakrooms are on the north side of the main passage-way, the cloakrooms being on the ground floor, and the lavatory accommodation in the basement. In the basement itself there are rooms for men and women attendants, each with their own lavatory, and there is also a room for visiting bands, also with lavatory.

The house, which formerly belonged to the Master of the Ceremonies, has the first floor fitted up for conferences, there being three committee rooms and ladies' and men's cloakrooms. The top floor of this house is for the resident caretaker of the rooms. A new heating and hot-water service has been installed throughout, the boilers being gas-heated, and there is an entirely new electric lighting installation.

During the progress of the work a bath, built entirely of stone about 12 ft. in diameter and 4 ft. 6 in. deep, was discovered in the basement under the west end of the ballroom, the sides of the bath-room being finished in clean stone with an apsidal recess at one end.

[Firms engaged on the work of restoration are on page 1261.—Ed.]



THE OCTAGON.

Woman's Fair, Olympia: Competition for Central Feature in Design Section.

A competition for the design of a Central Feature of the Design Section of Woman's Fair and Exhibition, which takes place at Olympia, London, on November 2 to 26, has been organised by the promoters of the Fair. Messrs. Charles Holden, F.R.I.B.A., Milner Gray, J. M. Ryan and F. R. Yerbury are assessors. A prize of £50 is offered.

The object of the competition is to secure a design for a central feature which will emphasise the importance of design in everyday life.

Drawings intended for the competition must be sent in to reach the promoters by July 1. They should be addressed to The Manager, Design and Leisure Sections, Exhibition Promoters (Olympia), Ltd., 32, St. James's-street, London, S.W.1, from whom conditions and particulars may be obtained.

IN PERSPECTIVE

By G. MAXWELL AYLWIN, F.R.I.B.A.

V.—Educational Systems.

THE period from 1900 up to the outbreak of war was to a certain extent a transitional period in architectural education, in that the day schools were expanding and beginning to attract full-time students in large numbers. At the same time, the pupilage system was in full swing, and all the chief offices had their articled pupils. In most cases students added a term of articles to their period at school and thereby completed a very thorough process of training, well balanced between the academical and practical sides of practice. The transition period thus created an unplanned but very full system of training, which produced well-equipped students of architecture, well fitted to undertake responsible office duties, and ripe for early practice on their own accounts.

A term of two years at a school, followed by three years articled, or three years at a school followed by two years articled, thus provided a means of training no more extensive than a modern five-year course, and in my view one more complete and effective.

We were in no grand hurry to sit for our Final, but students were generally ripe for its severe test after that time. I suppose the average age of passing would be about 24 or 25, and the successful candidates could be relied upon as responsible assistants. I think the same can hardly be claimed immediately for the five-year-course man.

I am sure that the personal contact between eminent architects and their pupils and the influence of one upon another were powerful factors in the process of training, for which there seems no substitute in the present system.

Sitting for the Final was a terrific ordeal, and a real test of character and ability. The examiners were mostly strangers to the candidates, and there were none of the advantages arising out of papers set by men whose idiosyncrasies are well known to the students. As a result, the status of Associateship was highly valued as a mark of competence, and no student without a fair measure of practical experience could hope to satisfy the Board.

The importance of maintaining the status of a diploma can hardly be exaggerated, and I think it is no imagination which suggests that an Associate of pre-war days had a more acknowledged standing both inside and outside the profession than has one of to-day.

These are matters of profound importance which deserve the earnest consideration of the powers. I think we have treated this aspect of qualification in far too light-hearted a manner, and that we have lost some standing in the process. It is even more serious than may appear, since the profession still contains a large number of active members who were trained on the old lines, and whose influence minimises the ill effects of the new order. To adjust matters, it is quite obvious that we shall have powerful influences to overcome.

Our actual training at the Schools was also somewhat different from the modern scheme. Sketching and measuring old work occupied a large portion of the students' course, and what an education in itself that branch of training can be! The student starts with three-dimensioned building and translates it into orthographical projection, seeing the convention by which fine effect is reproduced in the architect's medium. By natural outcome his mind learns thus to relate his drawings to his visions, so that he feels the solidity of the things he is creating.

Far too little attention is paid to this branch of training to-day. The result is the uninspired flatness of the design popular among the rising generation and an absence of that rich fluency which was the natural impulse of the complete pre-war student.

I seriously suggest that the privilege of exemption from the Final should be withdrawn from all schools, and that the school course should be reduced from a maximum of five years to one of three years.

I would also like to see the Institute restore its blessing upon a limited term of articled pupilage, to be planned in conjunction with the school curricula.

So far as school training itself is concerned, I would urge that less time be spent on design as a subject, and more on Historical study, and, above all, on Measured Work and sketching. Design will come from within if the student is one suitable for the calling of an architect. Construction can be learned in no more convincing way than in the hard school of a busy office. The gaps to be filled in by school training are wide, but not insurmountable.

At present, education is far too much in the hands of professional educationists, who work in a vicious circle, from which it is hard to escape. We shall have to break that circle and replan our resources entirely.

If there is any doubt upon these matters, a glance through the pre-war prize designs will surely show the wide difference in architectural quality between then and now. In the technique and tricks of rendering, the student of to-day can hold his own. In the inner sense of architectural grandeur and grace he is far behind.

Harsh criticisms? Yes, indeed, but it is often necessary to be cruel to be kind.

Our chief difficulty towards reform is that the pupilage system has more or less disappeared from the offices where it was most valuable, namely, the larger London offices, where work of a high standard could be assured. The system lingers most in remote and often very indifferent offices, ill equipped to hand on the highest tradition of art and its practice. These offices give the system a bad name and arm the critic with well-founded arguments against the system. We should have to devise some way of checking the activities of unsuitable offices, and encouraging those of the best, with the inertia of existing circumstances lying as a deadweight against us.

(To be continued.)

COMPETITION NEWS

Wood Green Municipal Offices.

The award of the assessors (Messrs. C. H. James, A.R.A., and S. Rowland Pierce, A.R.I.B.A.) in the open competition for designs for new municipal offices for Wood Green Borough Council, was declared on Wednesday night, and is given, together with the winning design, on pages 1237-1239.

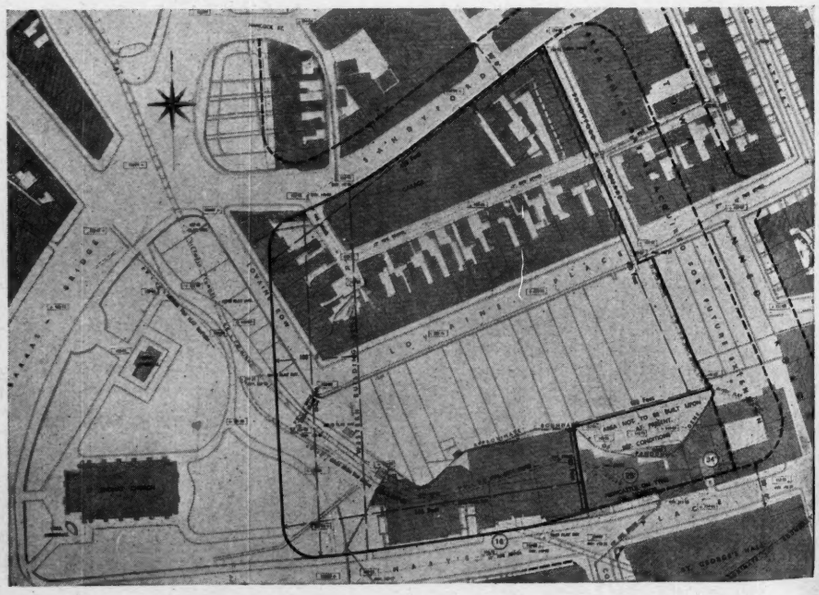
New Town Hall, Newcastle-upon-Tyne.

The Council of the City and County of Newcastle-upon-Tyne invite architects of British nationality to submit designs in open competition for the Town Hall proposed to be erected on a site at Barras Bridge, Newcastle-upon-Tyne.

Mr. Verner O. Rees, F.R.I.B.A., of 33, Bedford-place, London, W.C.1, is assessor, and premiums are £750, £500 and £300.

Questions must be addressed by July 13 to the Town Clerk, the Town Hall, Newcastle-upon-Tyne, 1, to whom designs must be sent not later than Wednesday, November 30, 1938, and from whom conditions and site plan may be obtained on deposit of £2 2s.

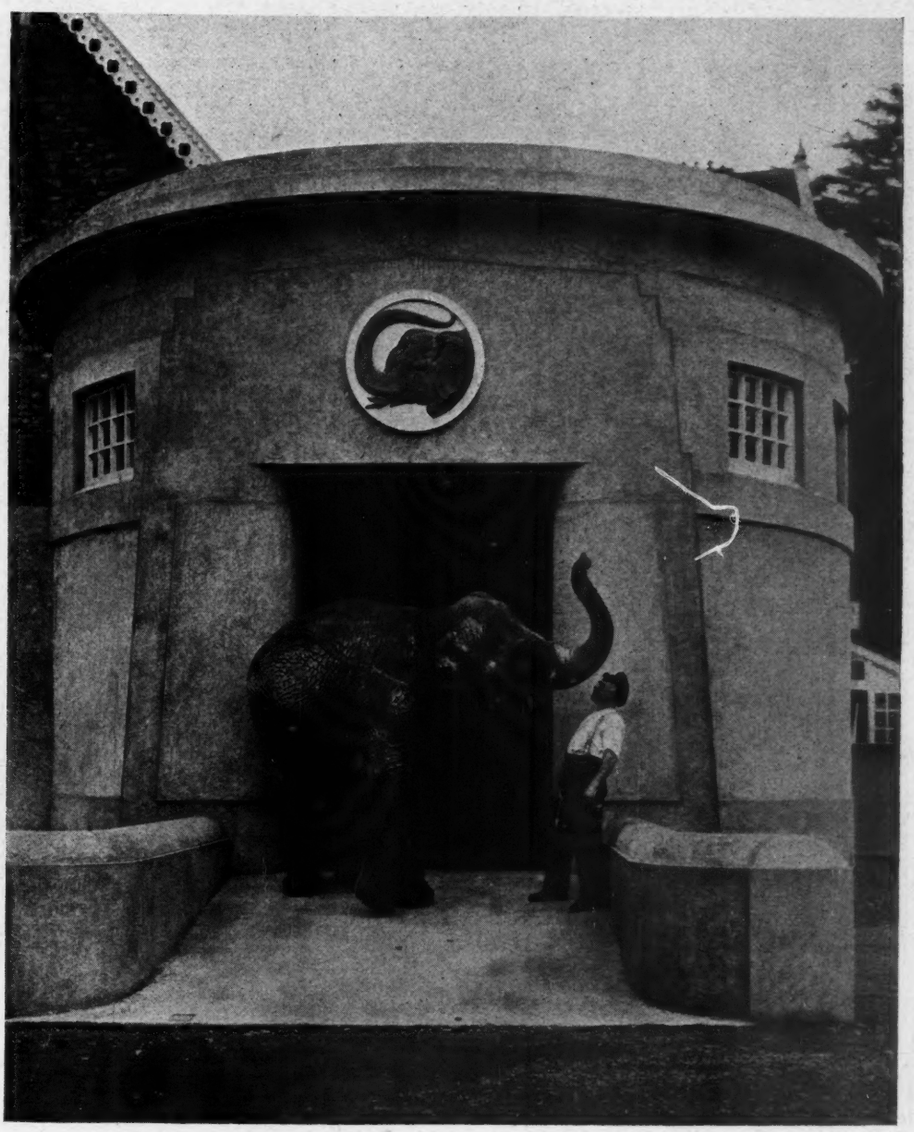
The Council have in mind the expenditure of a sum not exceeding £450,000 to cover the cost of the complete building, but excluding fees. Following are points from the conditions: The site of Eye Hospital, facing St. Mary's-place should be taken into account in planning for ultimate development. The space between the western curtilage line and the building line (shown as 100 ft.) is to be designed as a forecourt to the new building. Competitors are strongly recommended to visit the site. The whole of the construction is to be fireproof, and the whole of the exterior elevations must be faced with local stone. The Council particularly desire that competitors should give careful consideration to the expression of the grandeur of the architectural programme, both in the composition of the masses and in the detailing of the elevations.



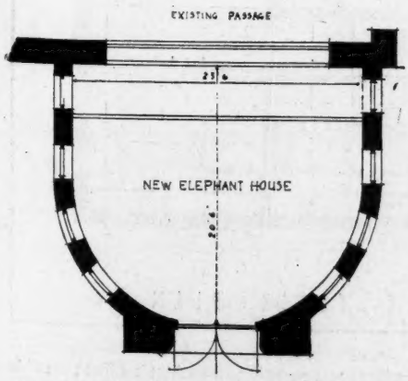
COMPETITION FOR NEW TOWN HALL, NEWCASTLE-UPON-TYNE: SITE PLAN.

AN ELEPHANT HOUSE, ZOOLOGICAL GARDENS, BRISTOL

MR. C. F. W. DENING, R.W.A., F.R.I.B.A., ARCHITECT.



THE EXTERIOR, SHOWING ENTRANCE.

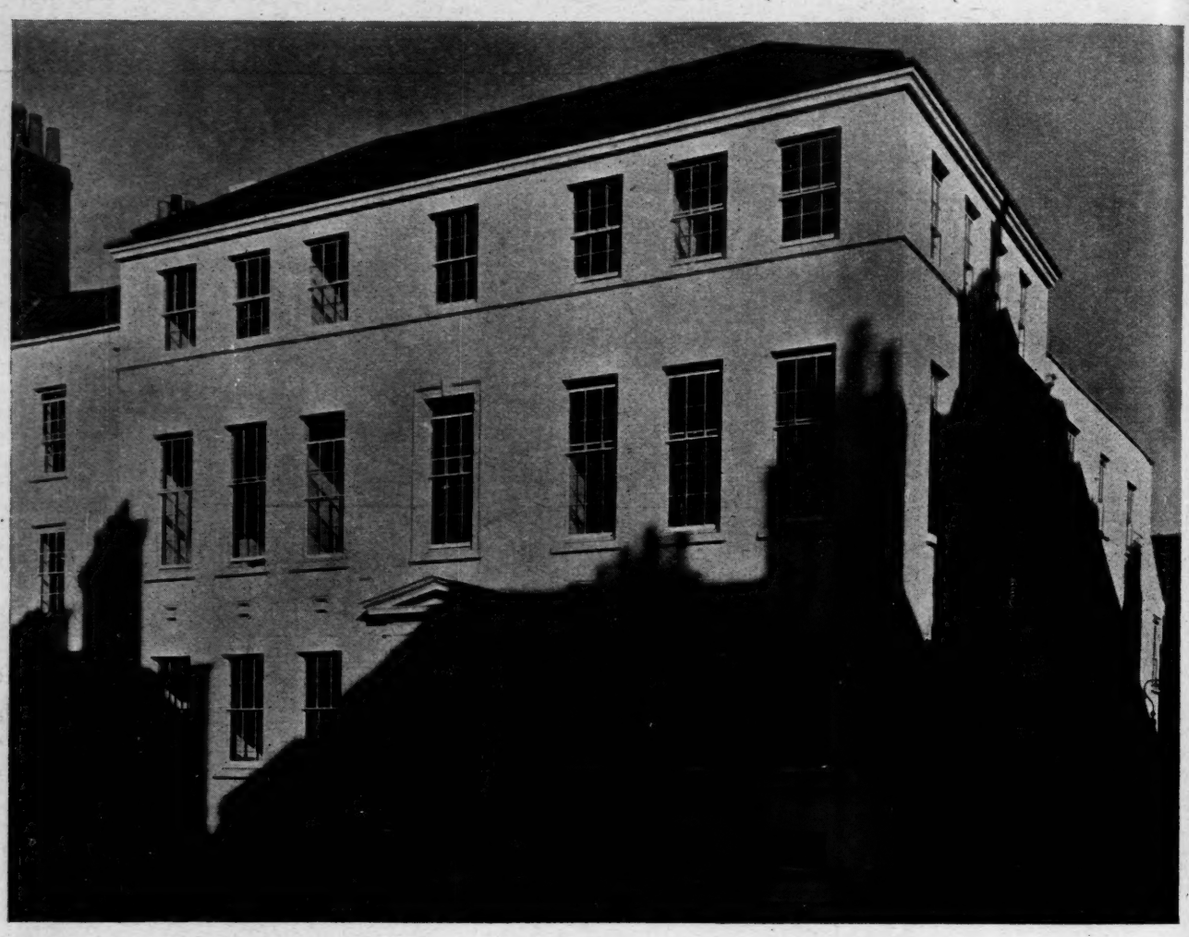


This elephant house in the Zoological Gardens, Bristol, was designed by Mr. C. F. W. Dening, R.W.A., F.R.I.B.A., and was erected by the staff of the Zoological Gardens. Built in reinforced concrete, the exterior walls are finished with roughcast of a dull pink colour. The teak doors were by Mr. Harris, of Bedminster.

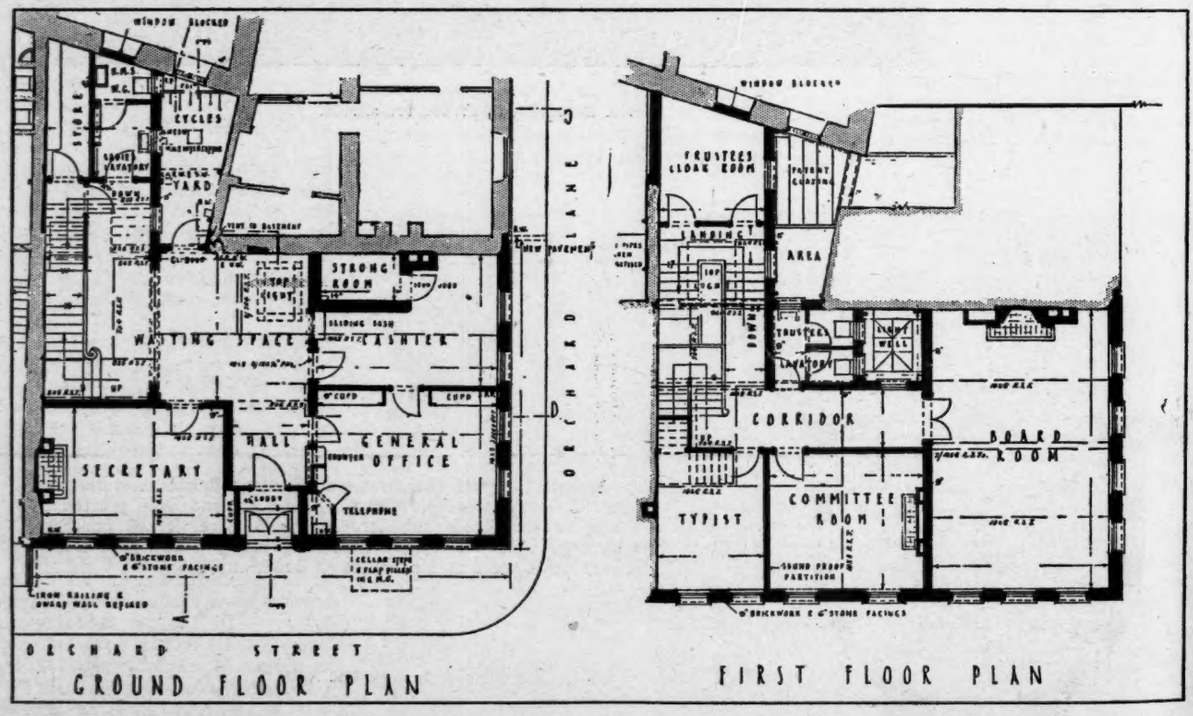
On Left : THE PLAN.

OFFICES, ORCHARD-STREET, BRISTOL, FOR BRISTOL MUNICIPAL CHARITIES

MESSRS. FRANK W. WILLS AND SONS, ARCHITECTS.



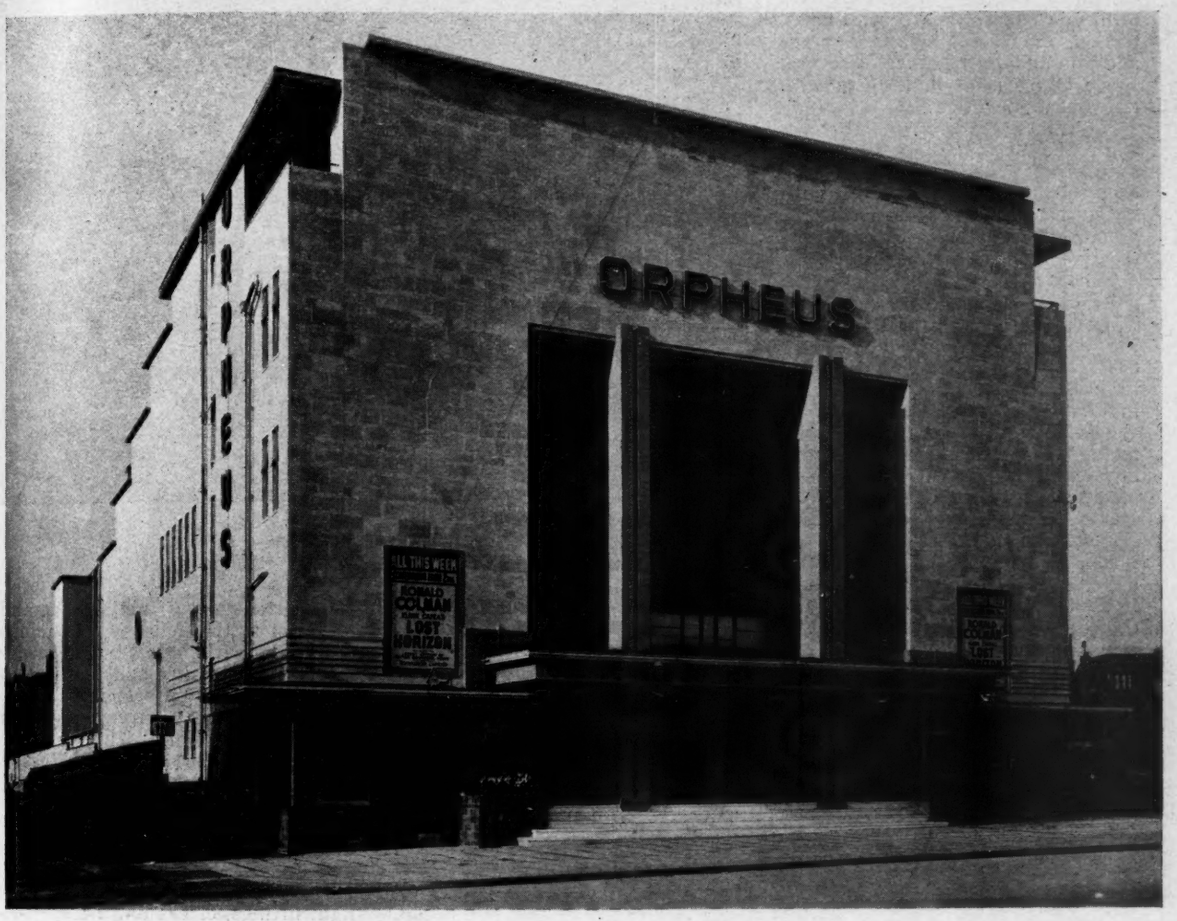
THE ORCHARD-STREET FRONT.



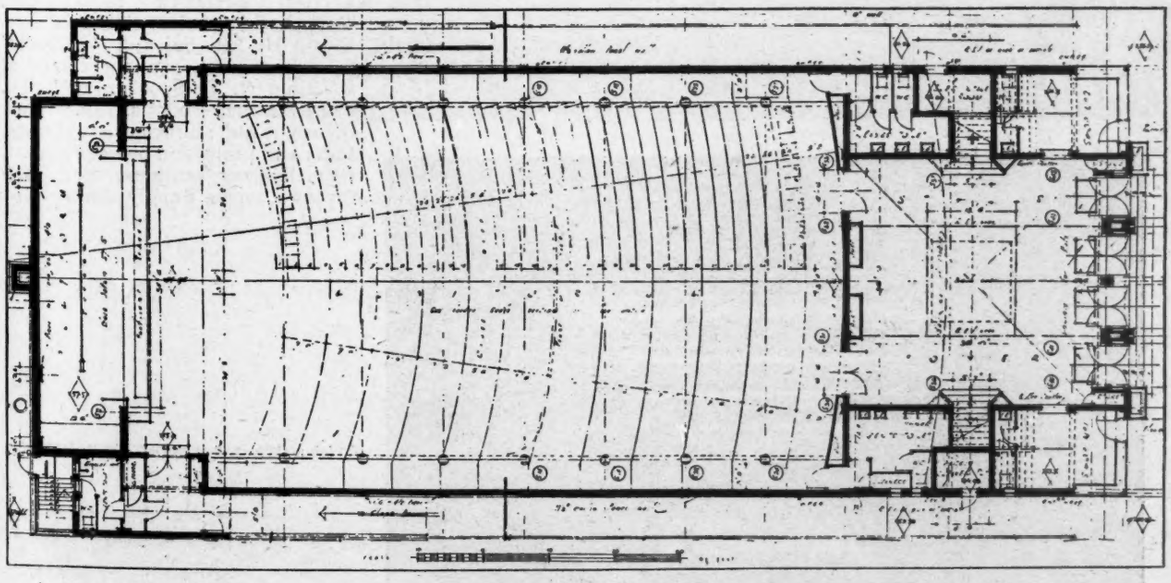
Built in Orchard-street, on a site formerly occupied by a French Chapel. In designing the facades, which are of Monks Park stone, an attempt has been made to harmonise with the early 18th-century period houses in the district. Accommodation comprises general office, secretary's and cashier's offices on the ground-floor ; board-room, committee room and typists' office on the first-floor ; the second floor being occupied by a caretaker. The contractors were Messrs. John Perkins and Son, Ltd.

THE "ORPHEUS" CINEMA, HENLEAZE, BRISTOL.

MR. ALEC F. FRENCH, L.R.I.B.A., ARCHITECT.



MAIN ELEVATION.



THE GROUND-FLOOR PLAN.

Erected on the Northumberland House Estate, Henleaze, Bristol, the "Orpheus" Cinema is built of cast stone, with "Permalite" facings in a pleasing shade of green. The latter have been arranged to receive neon strips, leading the eye from the ground through the canopy up to the spot lighting in the cornice. At the side of the building space for parking 200 cars has been provided. The auditorium has a decorative scheme of light and dark shades of gold, relieved by red and green.

THE "ORPHEUS" CINEMA, HENLEAZE, BRISTOL.

THE elevation of the "Orpheus" cinema is designed on modern lines to form a culminating central mass, flanked on one side by a new garage addition and on the other by several shops of a design in keeping with the garage elevation.

The frontage is in artificial stone, while the "Permalite" facings in a pleasant shade of green have been arranged to receive neon strips leading the eye from the ground through the canopy up to the spot lighting in the cornice.

A short flight of steps leads to four pairs of entrance doors, beneath a wide canopy, which give access to the spacious stalls foyer, simply decorated in gold and floored with rubber, introducing a motif worked in directly under the specially designed light fittings. Immediately facing the entrance doors is the pay-box, fitted with "Automaticket" machines. From this foyer the stalls are reached, while on each side are stairs, carpeted in green and black, leading to the balcony foyer above. This is lighted by a large front window in textured glass, and designed as a focal point formed by a pink mirrored glass feature and flower-box.

Heavy curtains, in a design to harmonise with the decorative scheme, have been fitted to this window. These curtains are lined with stone-coloured satin, so that when drawn across the window and viewed from the outside they will blend with the stonework of the façade of the building.

Suspended over the central floor well, which looks down into the stalls foyer, and which is protected by rails in green and gold, is a specially designed lighting fitment. The balcony foyer is also decorated in gold, but the floor is carpeted in green and black.

The auditorium has a distinctive scheme of decoration carried out in light and dark shades of gold, relieved by red and green. An air of spaciousness is achieved, and the impression of a "decorated box" is eliminated by the inclusion of column features along either side. The proscenium end of the building has been kept comparatively free of decoration, achieving an effect of simplicity and dignity. The whole of the auditorium is carpeted in green and black, and the seats upholstered in green. Indirect lighting has been installed in such a manner that it emphasises the beauty of the decorative scheme.

THE ENTRANCE FOYER.

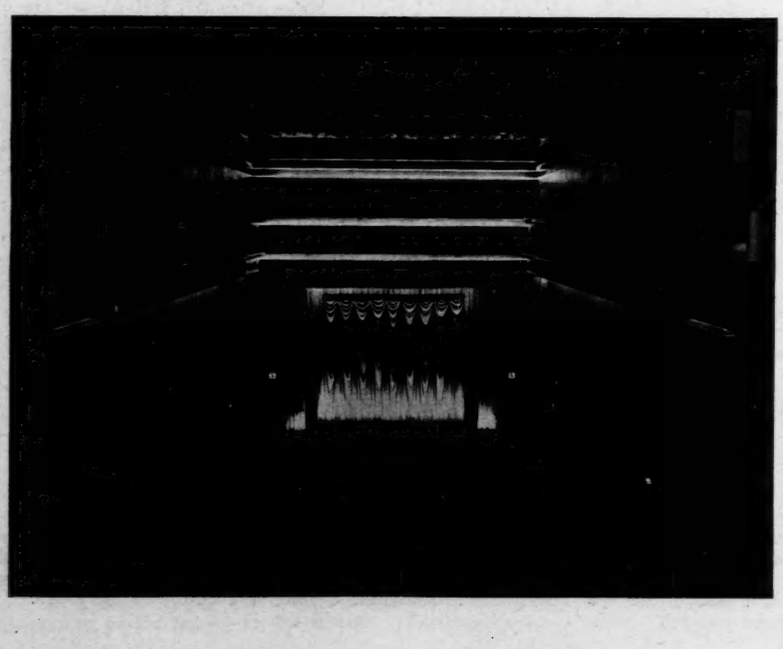
The proscenium opening is 38 ft. wide and 27 ft. high, and the stage fittings include a top batten and footlights. The stage tabs are in pink "Mirovel," and the screen curtains in ornamental silver satin.

The projection department is particularly well planned, and includes a spacious projection-box, rewinding room, rectifier room and workshop. The box is fitted with two Ernemann 7B projectors with built-in sound heads, and fitted with "Magnasol" arc lamps.

Special sets for deaf patrons have been fitted to certain seats, and attached to the house is a spacious car park, with accommodation for 200 cars. Heating and ventilation are on the Plenum system.

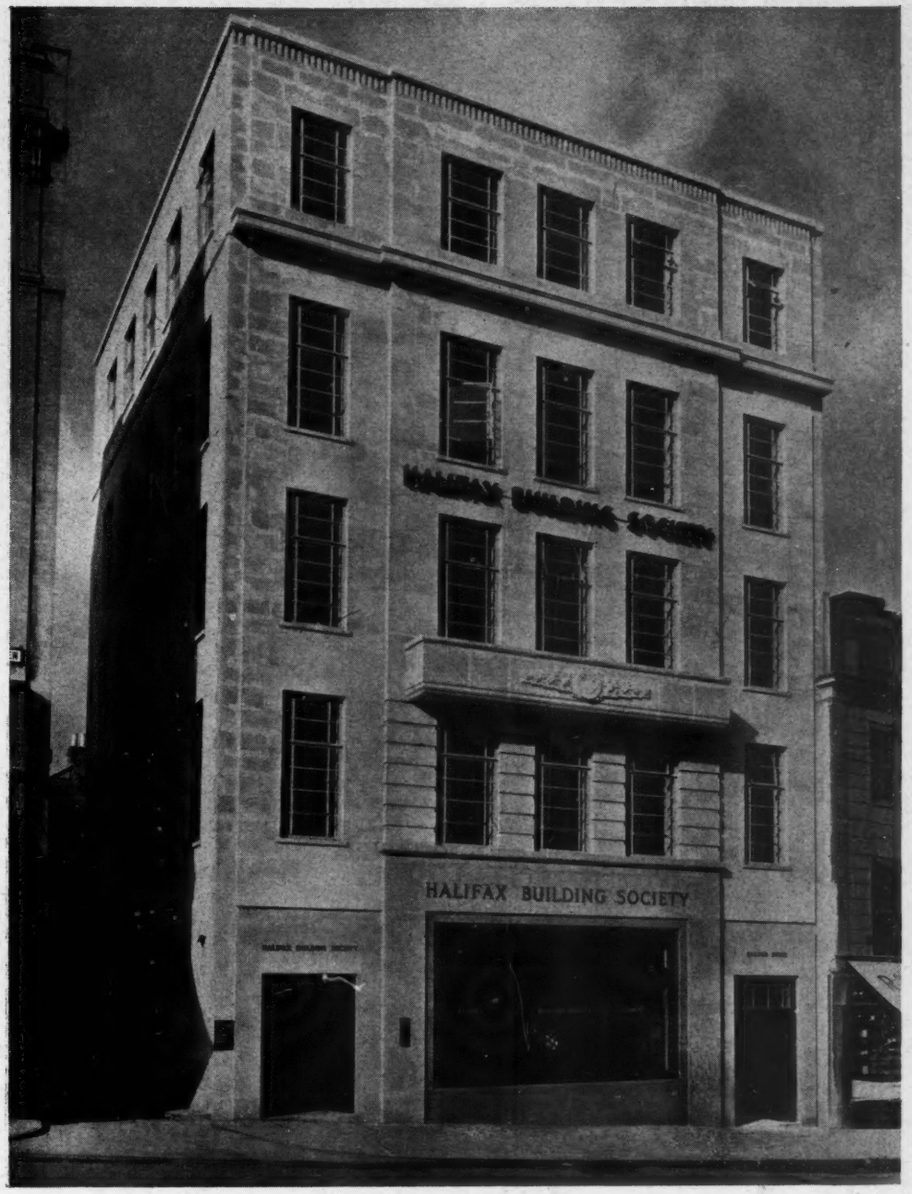
The quantity surveyors were Messrs. Gleeds, of Bristol, and the general contractors were Messrs. Stone and Co., of Bristol.

Sub-contractors engaged were:—Steelwork, ironmongery, metal windows, door furniture, Gardiner, Sons and Co., Bristol; terrazzo flooring, Mosaic and Terrazzo Co., Newport; light fittings, clocks and neon lighting, General Electric Co.; rubber flooring, India Rubber, Gutta Percha and Telegraph Works, Ltd.; plaster work, H. H. Martyn and Co., Cheltenham; asphalting, Western Trinidad Lake Asphalt Co., Ltd., Bristol; "Permalite" facings, etc., Slate Slab Products; steel reinforcement, Hy-Rib Sales; "Eternit" asbestos-cement roofing and vertical sheeting, G. R. Speaker and Co., Ltd.; seating, Pixtons, Ltd.; signs, Girosign, Ltd.; uniforms, A. Harold, Ltd.; and projection box equipment, stage lighting, curtains, etc., Walturdaw Cinema Supply, Ltd.



On left: VIEW FROM FRONT OF BALCONY.

MR. ALEC F. FRENCH, L.R.I.B.A., ARCHITECT.



ELEVATION TO ST. AUGUSTINE'S PARADE.

"HALIFAX HOUSE," ST. AUGUSTINE'S PARADE, BRISTOL.

MR. ALEC F. FRENCH, L.R.I.B.A., ARCHITECT.

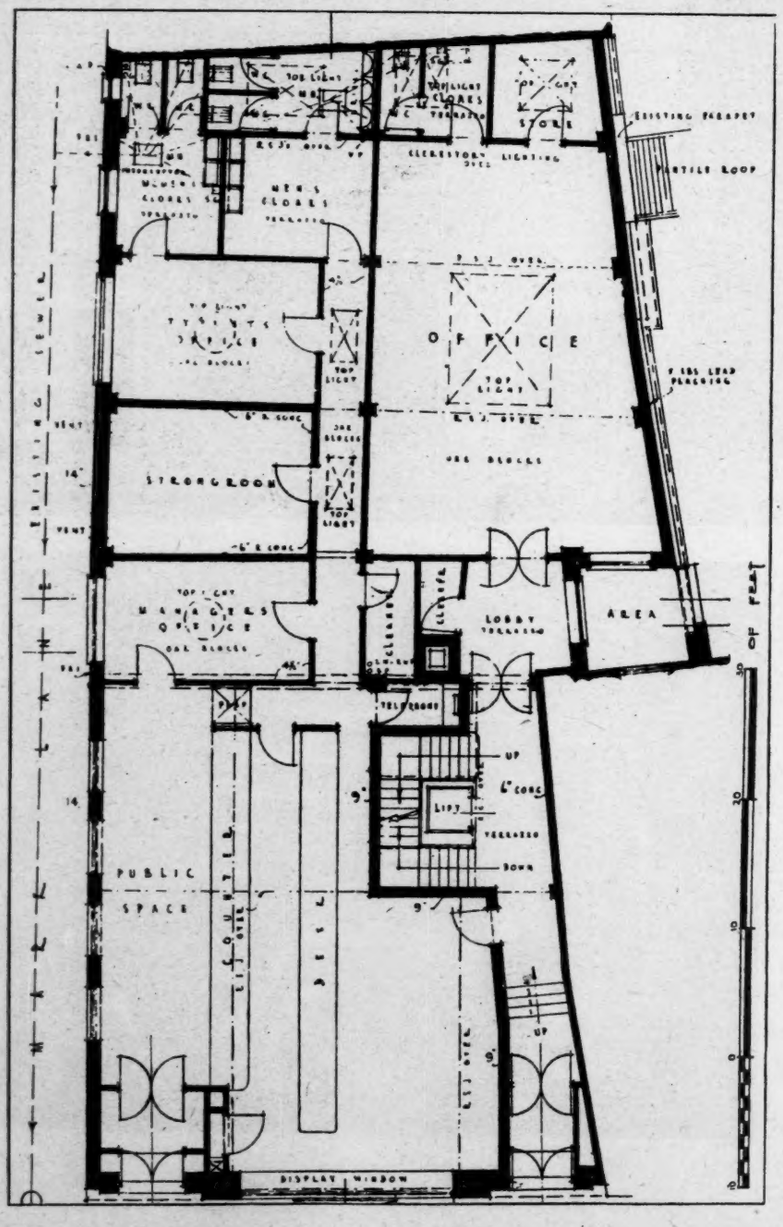
"HALIFAX HOUSE," ST. AUGUSTINE'S PARADE, BRISTOL

THIS building, recently completed for the Halifax Building Society, occupies one of the most prominent positions in Bristol, being situated on St. Augustine's-parade and facing the new Western-road now in course of construction.

The entrance is faced in Portland stone, the simplicity of the design being relieved by a balcony planned at second-floor level, the doors and main windows being in bronze. The ground floor is occupied by the Society, the accommodation consisting of general offices, manager's office, strong-room and staff rooms.

The general office and manager's office are panelled in "Peroba" relieved with ebony and sycamore. The fittings and counter are in Australian walnut, as is also the joinery. The floor to the public space is rubber, the general office linoleum, and the manager's office close-carpeted. A separate entrance serves the remaining floors, which are devoted to office lettings.

VIEW OF GENERAL OFFICE.



The quantity surveyors were Messrs. Gleeds, of Bristol, and the general contractors were Messrs. Wm. Cowlin and Son, Ltd., of Bristol. Sub-contractors engaged were: Reinforcement, Hy-Rib Sales and Trussed Concrete Steel Co., Ltd.; strong-rooms, Ratner Safe Co., Ltd., Leeds; steelwork, lantern lights, shop front, bronze entrance doors, etc., ironmongery and metal windows, Gardiner, Sons and Co., Ltd., Bristol; asphalting, Western Trinidad Lake Asphalt Co., Ltd., Bristol; pavement lights, J. A. King and Co., Bristol; lifts, J. and E. Hall, Ltd., Dartford; wood block flooring, Hollis Bros. and Co., Ltd., Hull; terrazzo pavings, Diespeker and Co., Ltd.; Roman stone facing to entrance lobbies, F. W. Howells, Bristol; electrical work, W. T. Porter and Co., Bristol; neon sign and electrical fittings, General Electric Co.; plumbing and heating, A. Scull and Son, Ltd., Bristol; sanitary goods, Metal Agencies Co., Bristol; linoleum, Jones and Co., Ltd., Bristol; and rubber flooring, Silvertown Rubber Co., Ltd.

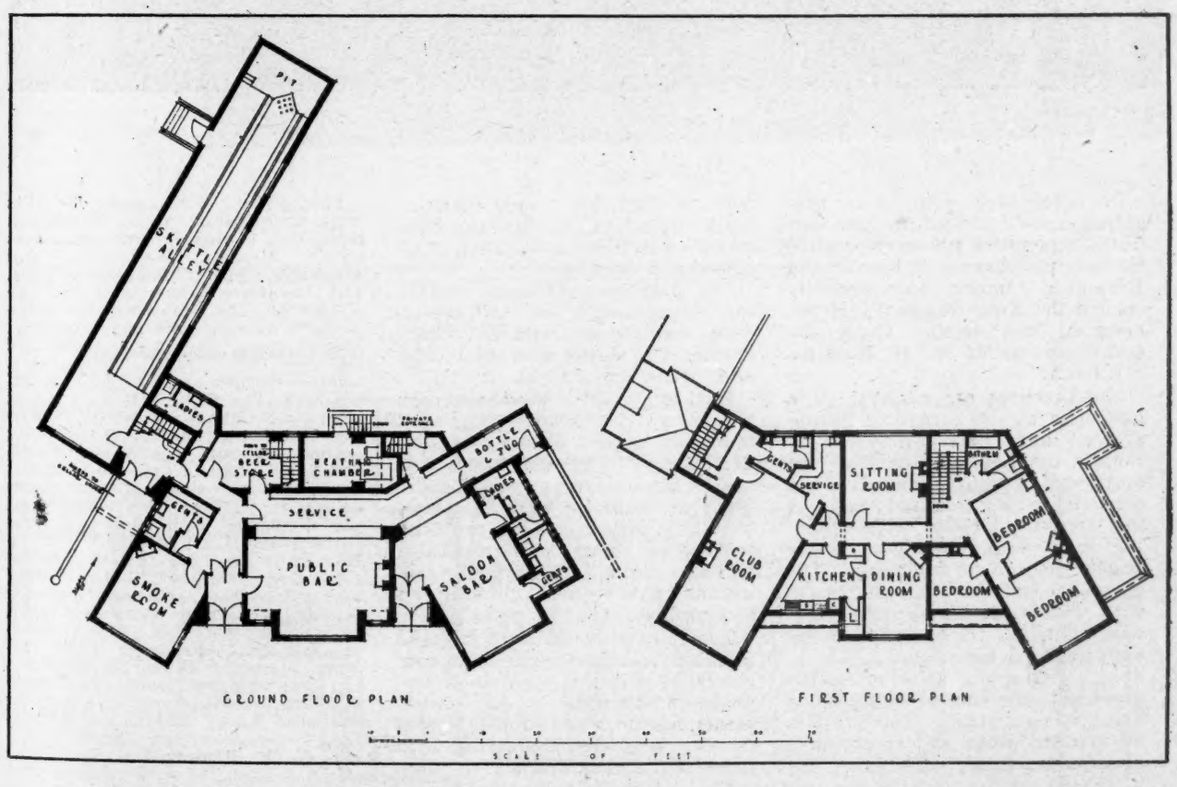
On left: GROUND-FLOOR PLAN.

MR. ALEC F. FRENCH, L.R.I.B.A., ARCHITECT.

THE "KING GEORGE VI" HOTEL, FILTON, BRISTOL

MR. W. H. WATKINS, F.R.I.B.A., ARCHITECT.

VIEW OF MAIN FRONT.



THE PLANS.

These licensed premises are in full accord with the trend of modern public-house design, which has been extended within recent years to include accommodation for amusement, meetings and suppers. The "King George VI" Hotel has a large skittle alley and a club-room, the latter being at first-floor level and approached by a separate staircase hall, from which access to the skittle alley also is given. The construction of the premises is in brick, the walls being finished externally in cream cement rendering. The shutters are painted green and cream, and a feature is the shaped centre gable constructed in cast stone.

THE "KING GEORGE VI" HOTEL, FILTON, BRISTOL

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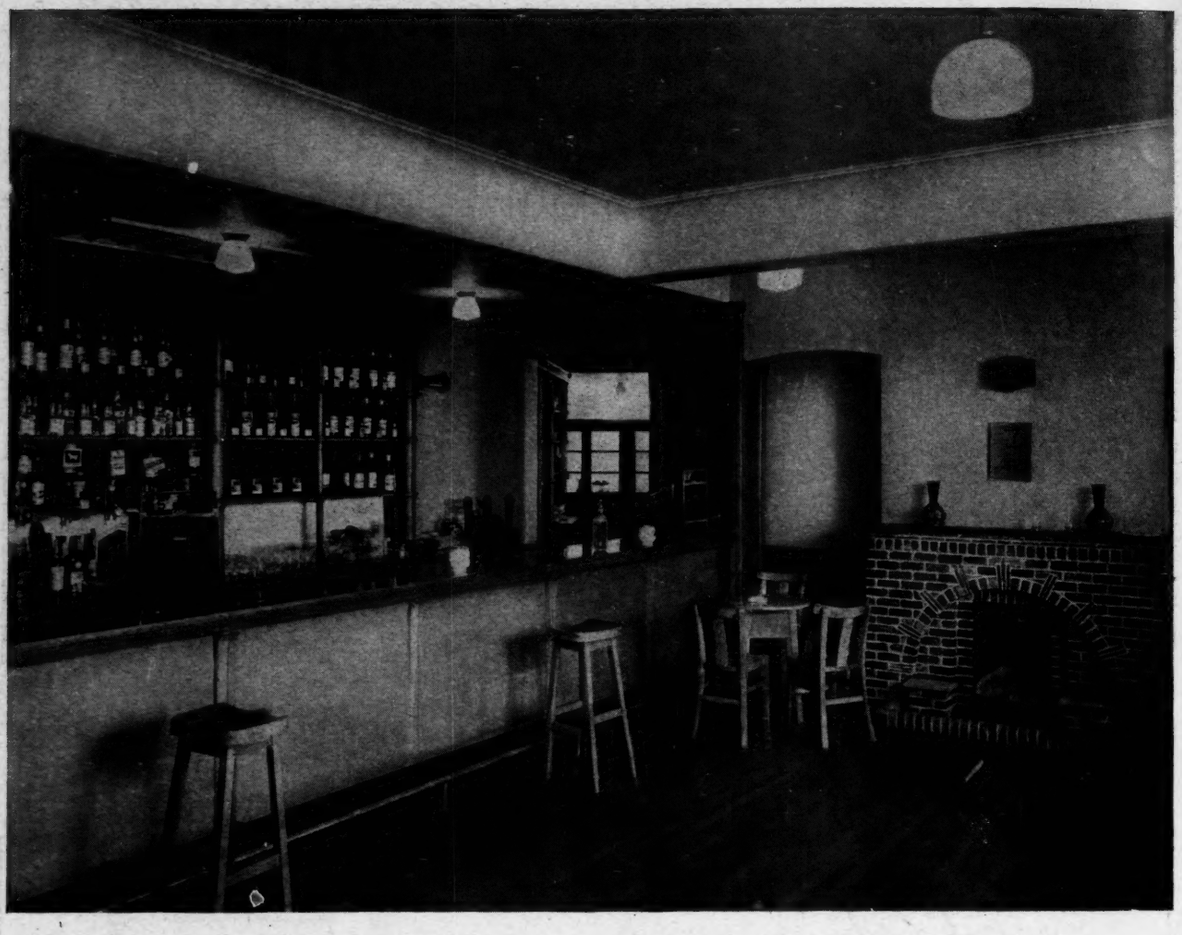


THE PUBLIC BAR.

In accordance with their programme of providing modern licensed premises wherever possible for their patrons, the Bristol United Breweries, Limited, have recently opened the King George VI Hotel, designed and erected under the supervision of Mr. W. H. Watkins, F.R.I.B.A.

The premises are situated on a large site at the corner of Filton-avenue and Station-road in a rapidly developing district on the north-west side of Bristol. They are well set back from the road, and the forecourt, together with adjoining car park, provides ample accommodation for motorists. The general construction is in brick, with hollow-tile floors and roofs where flat, and the walls externally are finished in cream-tinted "Cullamix," with green slate roofs, the capping to the shaped centre gable being in cast stone. The shutters are painted green and cream on a grey background. Internally, the bars have oak floors, dado, counters and fittings, and walls are finished with paint and distemper stippled on each other. The floors and dadoes of lavatories are terrazzo, with painted walls and ceilings.

Central heating is installed throughout, with smoke extraction to the bars through grilles in the false ceilings over service. In addition there are simply designed brick fireplaces in the principal rooms. Electrical installation is all in screwed conduit.

The principal entrances lead to the lounge, public bar and smoke-room respectively, with subsidiary entrances to skittle alley, club-room and bottle department.

Most important is the installation for draught beer, where the latest improved method of stainless steel flexible couplings and pipes has been used, and also special stainless steel sinks for washing glasses have been installed in the counters, minimising noise and breakages and also adding to the hygienic conditions now being provided for serving beer.

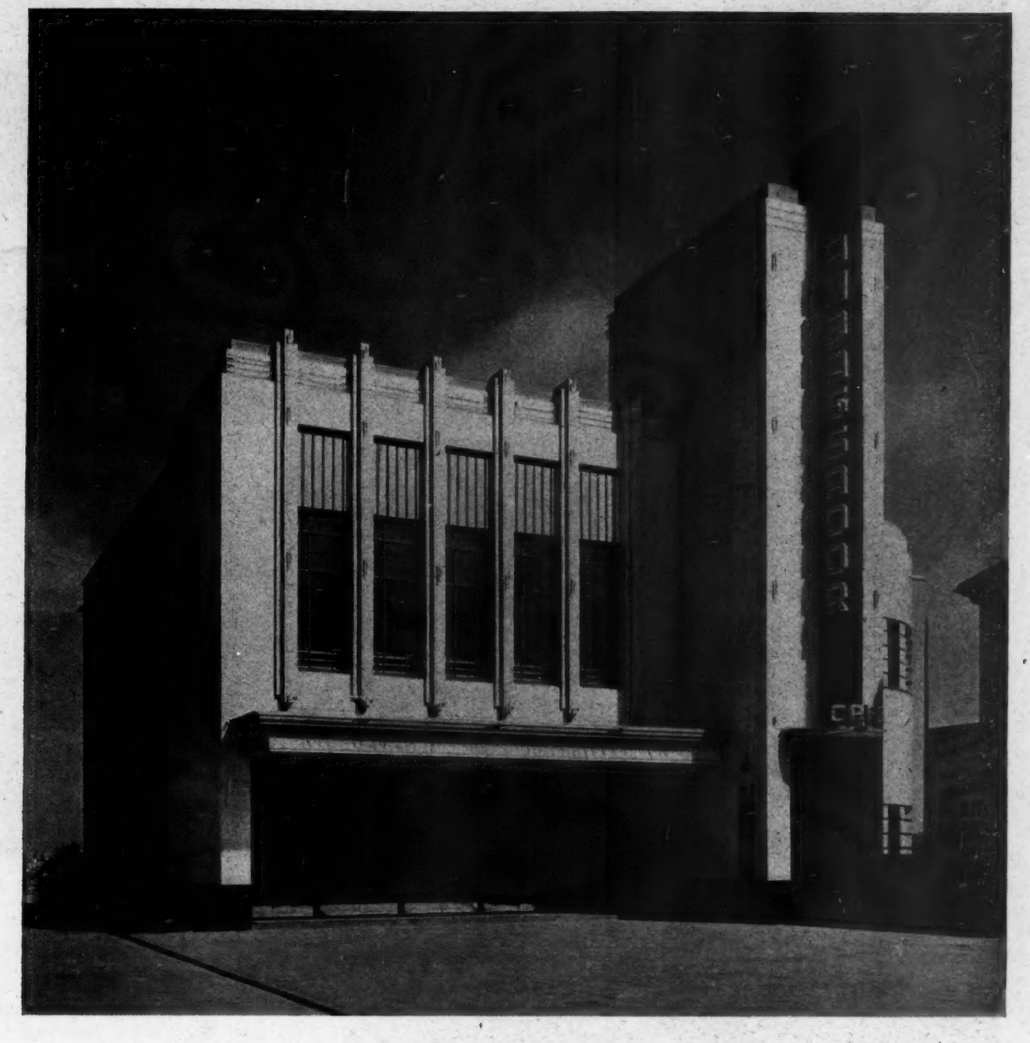
The function of modern licensed premises has of late years been considerably widened, and now includes accommodation for amusements, meetings and suppers as will be seen here by the provision of a large skittle alley and a club-room, which latter is at first-floor level and approached by a separate staircase hall. Full use has been made of colours in the decoration, which is well illustrated in the original treatment of the various rooms.

Accommodation has also been provided on the first and second floors for hotel visitors, and the licensee and staff respectively.

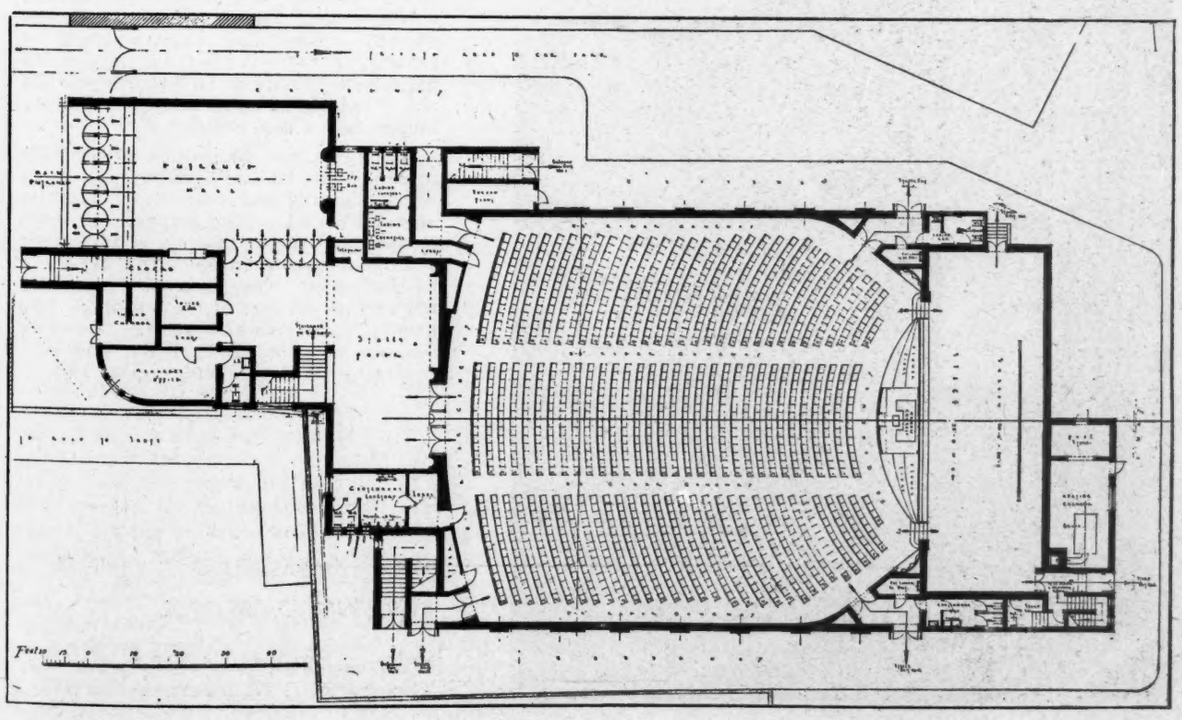
The general contractors for this work were Messrs. C. A. Hayes and Sons, Ltd., of Bristol. Sub-contractors were: Heating, ventilation and plumbing, Arthur Scull and Sons, Ltd.; reinforced concrete floors, The Kleine Co., Ltd.; constructional steelwork, Gardiner, Sons and Co., Ltd.; precast stone, The Bristol Stone and Concrete Co., Ltd.; slate roofs, Charles Cornish and Co., Ltd.; metal windows, The Crittall Manufacturing Co., Ltd.; Cullamix external rendering, The Cement Marketing Co., Ltd.; asphalt flat roofs, The Western Trinidad Lake Asphalte Co., Ltd.; asphalt macadam surfacing to forecourt, James Durnford and Son, Ltd.; paint and distemper, John Hall and Sons (Bristol and London), Ltd., and the Walpamur Co., Ltd.; slate window sills, Slate Windows, Ltd.; fencing and gates, The Darlington Fencing Co., Ltd.; tiling to signpost, Craven Dunhill and Co.. Ltd.; cellar waterproofing Sika Francois, Ltd.; internal plastering (Victorite), Cafferata and Co.; terrazzo, The Marble Mosaic Co., Ltd.; hardwood oak strip flooring and wood blocks, Stevens and Adams, Ltd.; ironmongery and Erinoid lettering, N. F. Ramsay and Co., Ltd.; electrical installation, Buchanan and Curwen. Ltd.; electrical light fittings, The Metal Agencies Co., Ltd., Gardiner, Sons and Co., Ltd.; neon lighting, The Silent Salesman Co.; flush doors, Shapland and Petter, Ltd.; bar counters and fittings, C. A. Hayes and Sons, Ltd.; stainless steel wash-up drainers, Llewellins and James, Ltd.; beer engine installation, Rigid and Flexible Couplings, Ltd.; and rope nets and mats for skittle alley, Wm. Terrell and Sons, Ltd.

THE "AMBASSADOR" CINEMA, KINGSWOOD, BRISTOL

MR. F. C. MITCHELL, L.R.I.B.A., ARCHITECT.



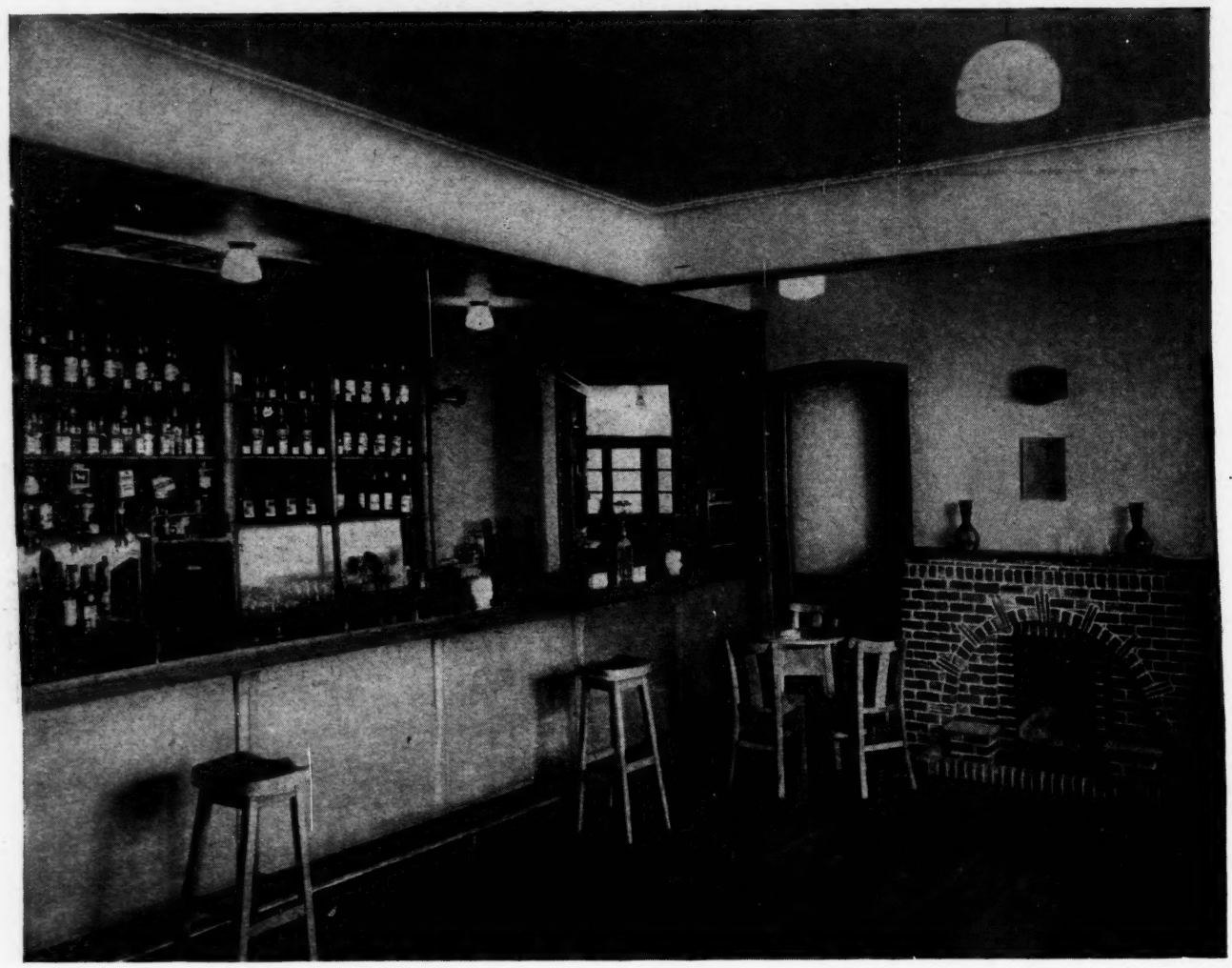
THE ENTRANCE FRONT.



THE GROUND-FLOOR PLAN.

THE "KING GEORGE VI" HOTEL, FILTON, BRISTOL

MR. W. H. WATKINS, F.R.I.B.A., ARCHITECT.



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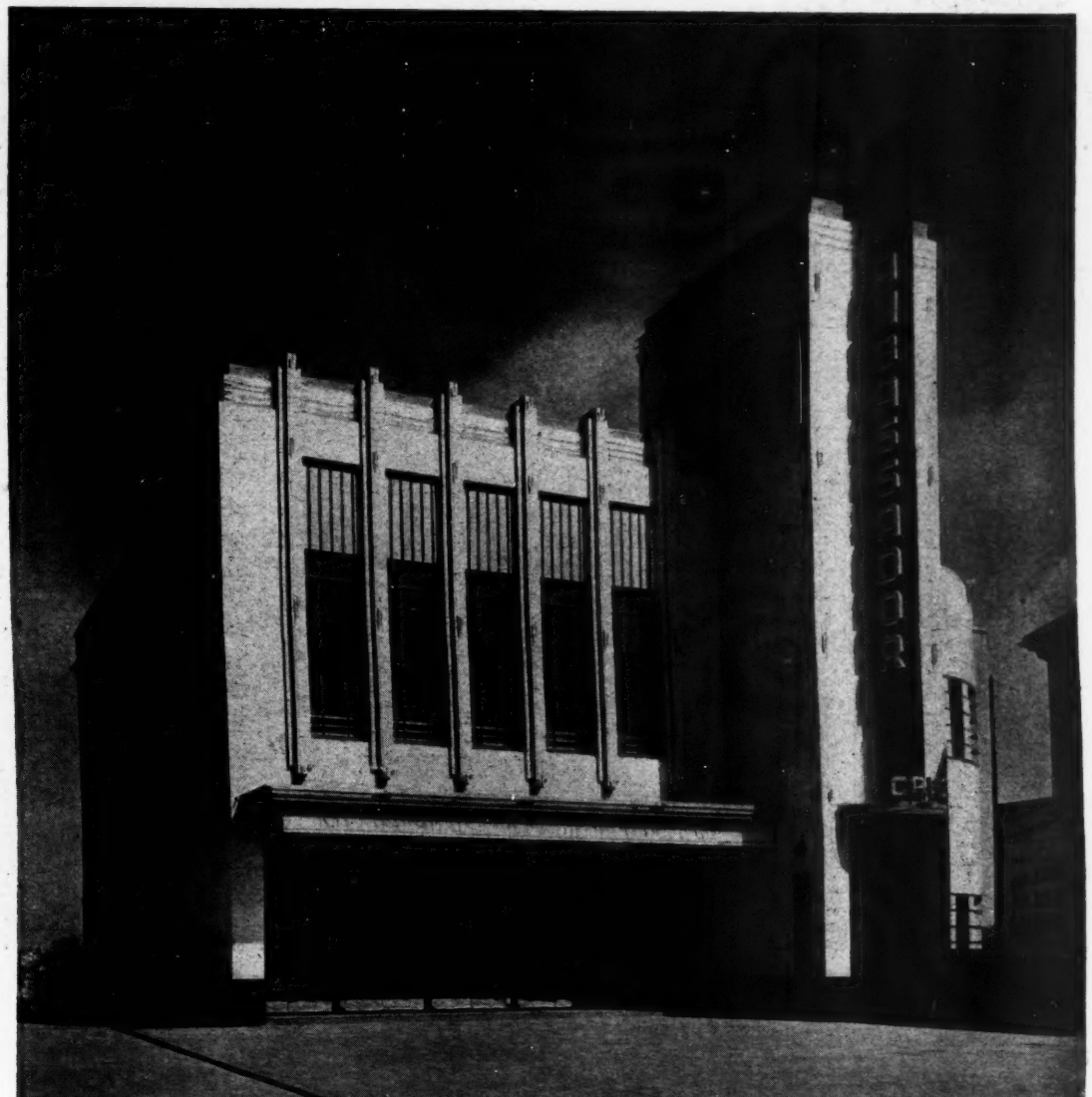
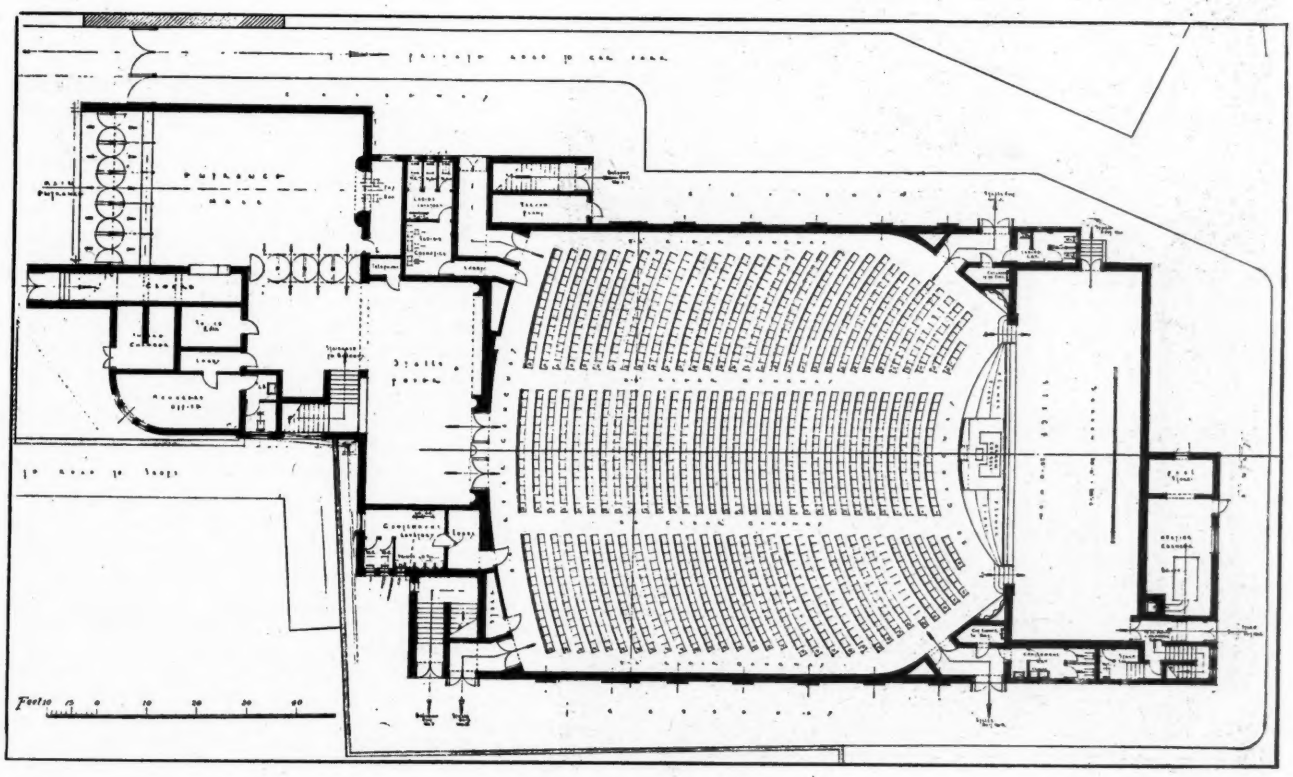
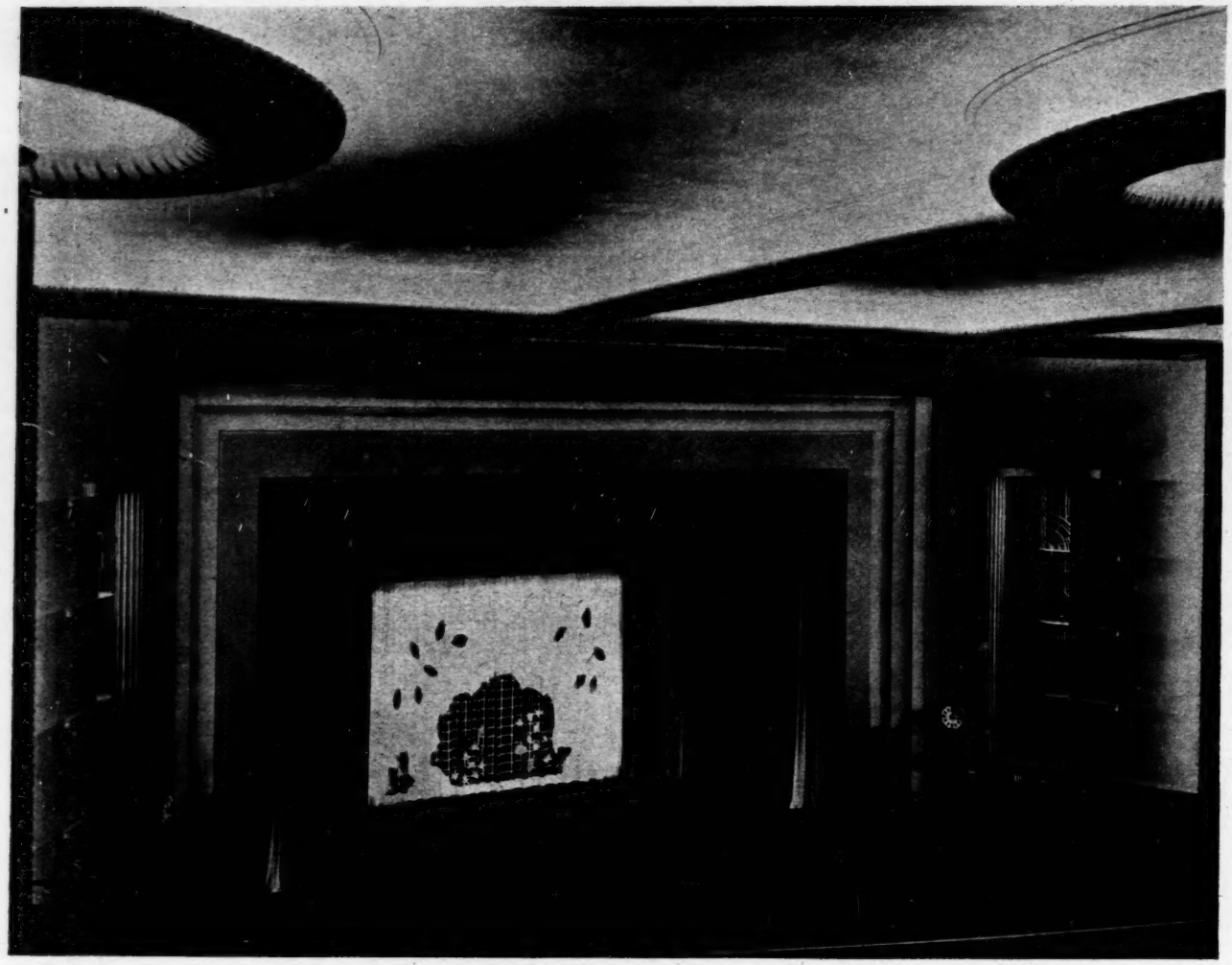


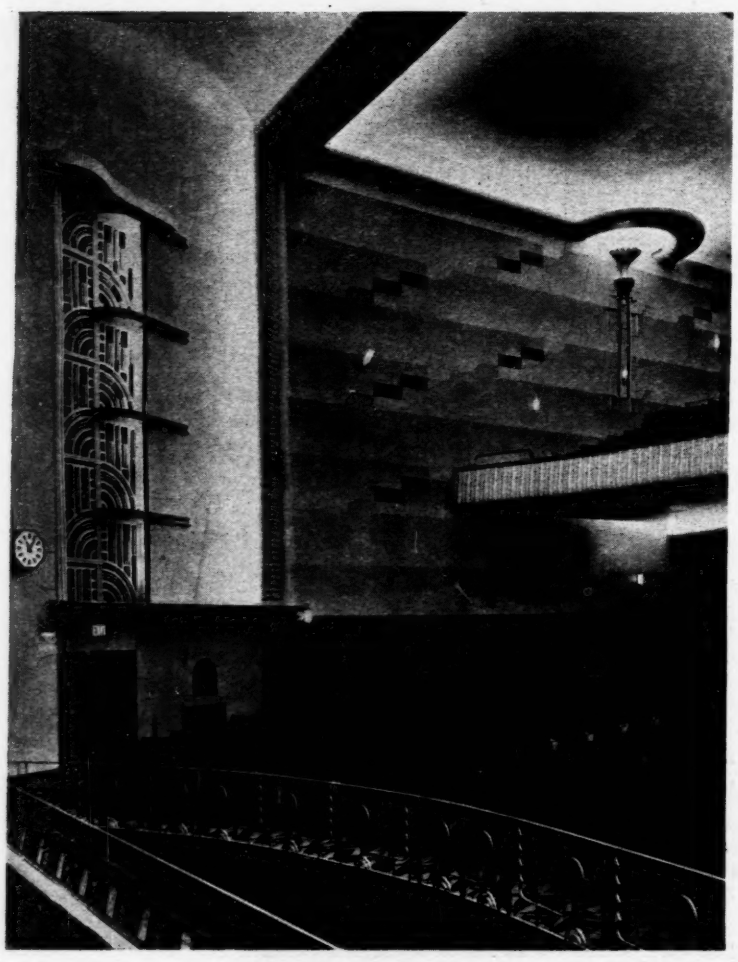
THE ENTRANCE FRONT.



THE GROUND-FLOOR PLAN.



VIEW OF THE PROSCENIUM FROM THE BALCONY



THE AUDITORIUM, FROM STAGE.

THE dominating external feature of the building is the tower over the main elevation, which is picked out with red and blue neon lighting. The entrance hall, which is decorated with a cheerful colour scheme, is floored with rubber, and gives access to the paybox and all parts of the cinema. The main staircase from entrance hall leads to the tea lounge, balcony foyer and balcony, with a separate entrance to the tea lounge, which will also be available for patrons who are not viewing the programme. The tea lounge has a dance floor.

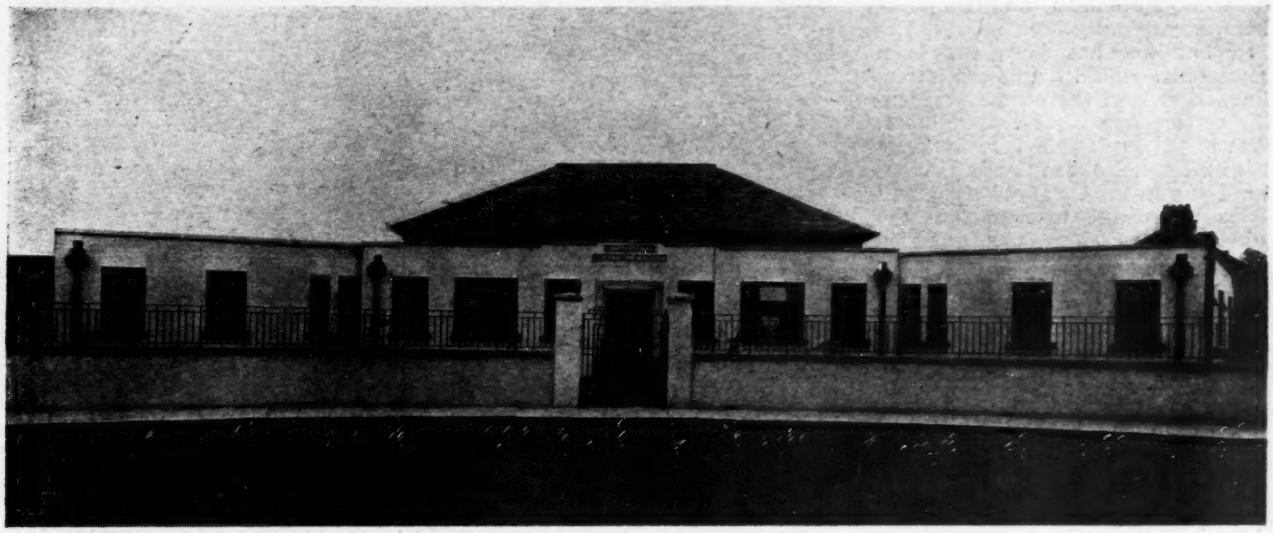
Seating in the auditorium is for 2,000 persons. Special attention has been given to the lighting and ventilation, which is air-conditioned. The building is steel-framed, and the auditorium and all other ceilings were constructed with " Hy-Rib " reinforcement. There is a car park taking 600 cars at the rear of the building. The general contractors were the Berkeley Construction Co., Ltd., E.C.1, and sub-contractors will be found on page 1261.

THE " AMBASSADOR " CINEMA, KINGSWOOD, BRISTOL.

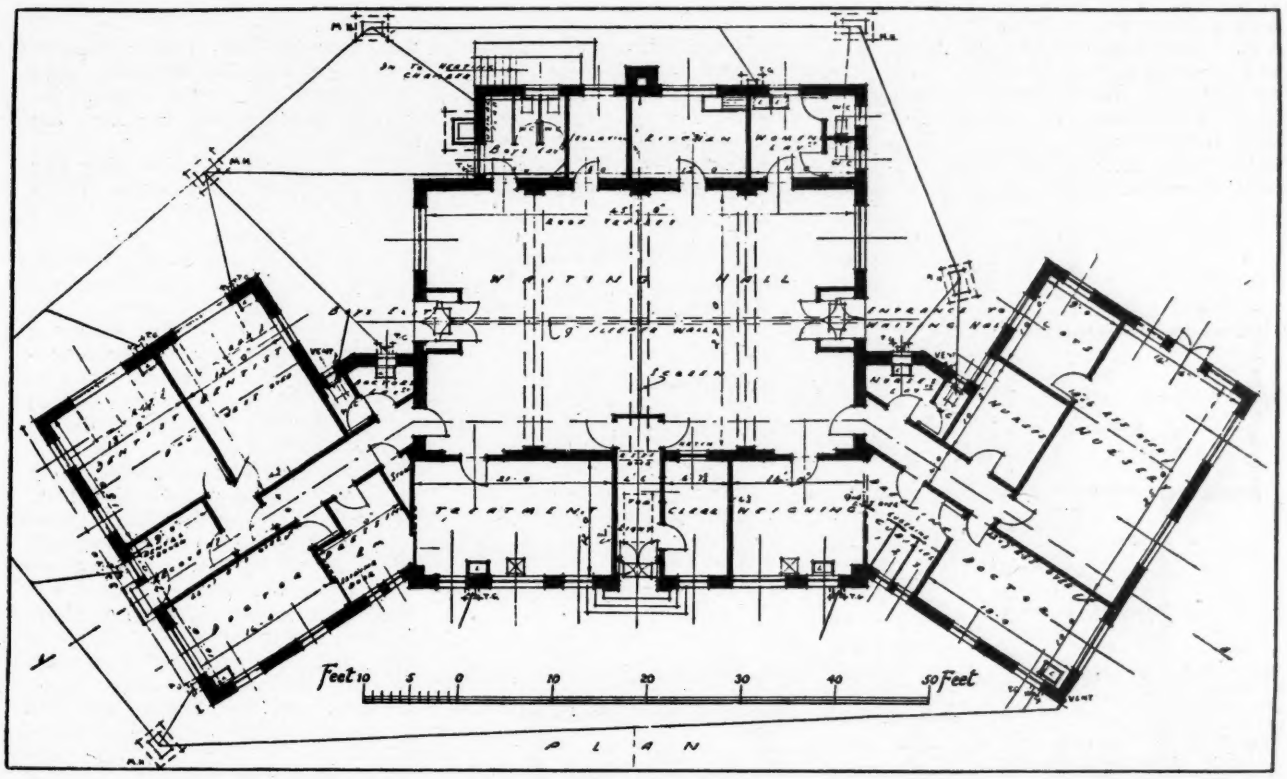
MR. F. C. MITCHELL, L.R.I.B.A., ARCHITECT.

A HEALTH CLINIC, ST. JOHN'S LANE, BEDMINSTER

MR. HAROLD E. TODD, A.R.I.B.A., ARCHITECT.



THE ENTRANCE FRONT.



THE PLAN.

THE site of the building is on the corner of St. John's-lane and Wedmore Vale, on what was some low-lying ground in relation to the road levels. For this reason the ground-floor level of the building has been raised, leaving a ventilated space between the ground and the floor. The site surrounding the building has been "made up" to the requisite levels. The building is, as nearly as possible, fireproof, the walls being of brickwork in cement mortar and the ground floor and flat roofs of reinforced concrete. The roof over the main waiting-hall is constructed of steel and timber and covered with Cornish slates. The heating of the building is obtained by the low-pressure hot-water system, the radiators being of the wall type.

The whole of the electric wiring is carried out in screwed galvanised tubing, and all lighting and heating plugs in walls and skirtings are of the mechanically-interlocked type to ensure there will be no danger to naturally inquisitive infant hands. Particular attention has been paid to the cold-water supply to all lavatory basins and sinks, these being drawn off the main and not from a storage cistern. In the finishing of the building, simplicity and the use of smooth surfaces has been the aim. The floors in the waiting-room and all principal rooms are teak blocks. The cost was approximately £6,900.

The main contractors were Messrs. Stone and Co. (Bristol), Ltd., of Bristol. Sub-contractors were:—Heating, G. N. Haden and Sons, Ltd.; plumbing, A. Scull and Son, Ltd.; electric installation, Gough Bros.; structural steel, John Lysaght, Ltd.; metal windows, Crittall Mfg. Co., Ltd.; and railings, Bayliss, Jones and Bayliss.

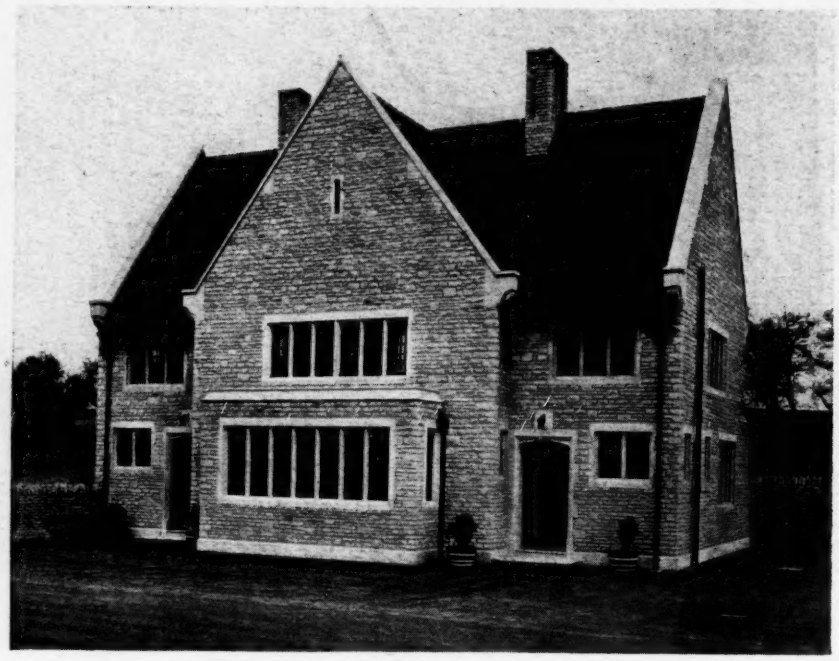
THE "SHOE" INN, NORTH WRAXALL, WILTSHIRE.

"SHOE" INN, North Wraxall, Wilts, situated on the London-road between Marshfield and Chippenham, has recently been rebuilt. The new building has been set back some 40 ft. behind the present street line, in view of the ultimate widening of this important thoroughfare.

It has been designed to conform with the amenities of the neighbourhood and in the Cotswold style, and it is interesting to note that the whole of the stone was quarried almost immediately adjoining the site. The external walling, faced with Cotswold stone and cast stone dressings, is steeply roofed with a particularly fine example of smoky-black, hand-made Broseley tile.

The entrance doorways, designed to conform with the general style of the building, are in Austrian oak, and the windows are metal casements filled in with lead glazing. The siting of the new building being on the new street line has enabled the architect to provide for a very commodious car park in the front of the building.

The licensed accommodation provides for a public bar 25 ft. by 14 ft., with a large bay window 15 ft. by 4 ft. 6 in.; a saloon bar, 18 ft. by 16 ft.; and a private bar, 13 ft. 6 in. by 12 ft. 6 in. These three bars have been planned around a central service, behind which is a commodious bottle store and access to the tenants' quarters.



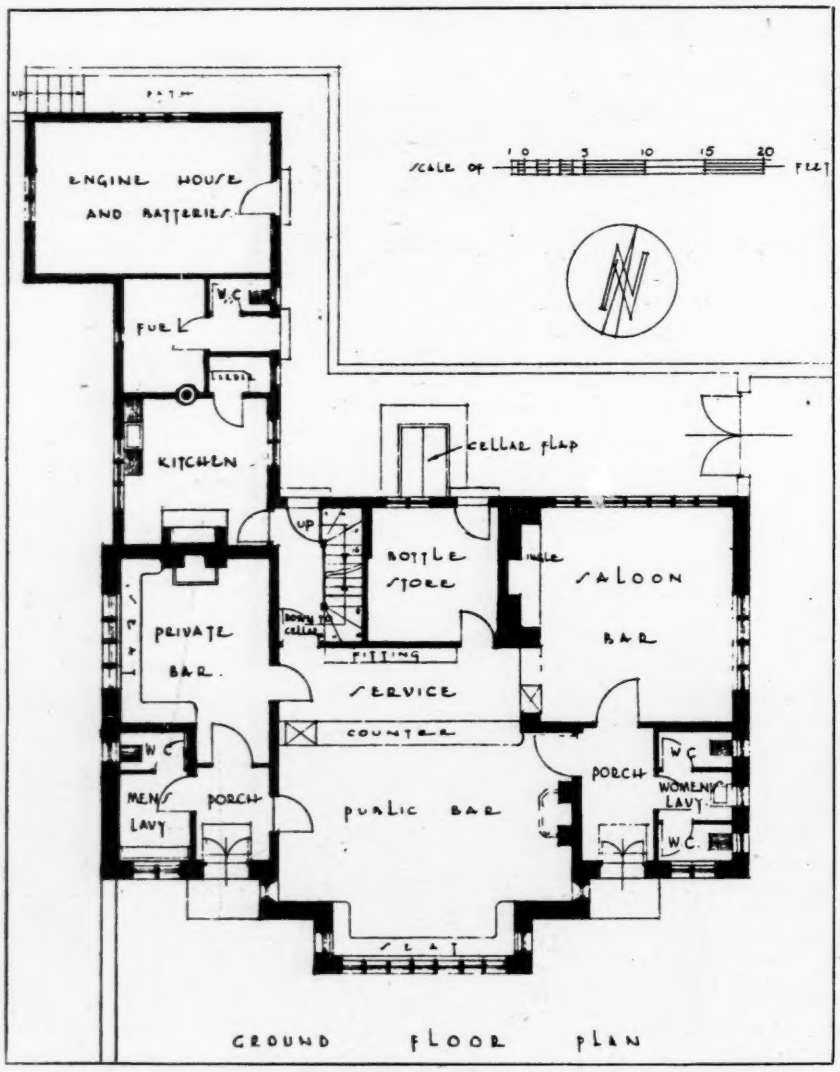
THE ENTRANCE FRONT.

The walls and ceiling of the public bar are plastered with a sack-swept finish, whilst the walls of the saloon and private bars are panelled to a height of approximately 7 ft. 6 in. in Austrian oak. The saloon bar is provided with an ingle nook, whilst the other two bars have specially-designed cast stone fireplaces. The first floor is entirely devoted to living accommodation for the tenant.

The erection of this building was especially interesting in that it was necessary to provide a lighting plant, sewage disposal plant, and a water supply, the whole of which has been successfully achieved and is quite satisfactory.

An opening in the southern boundary wall to the car park provides access to a very spacious garden, which has been laid out to harmonise with the general design of the building.

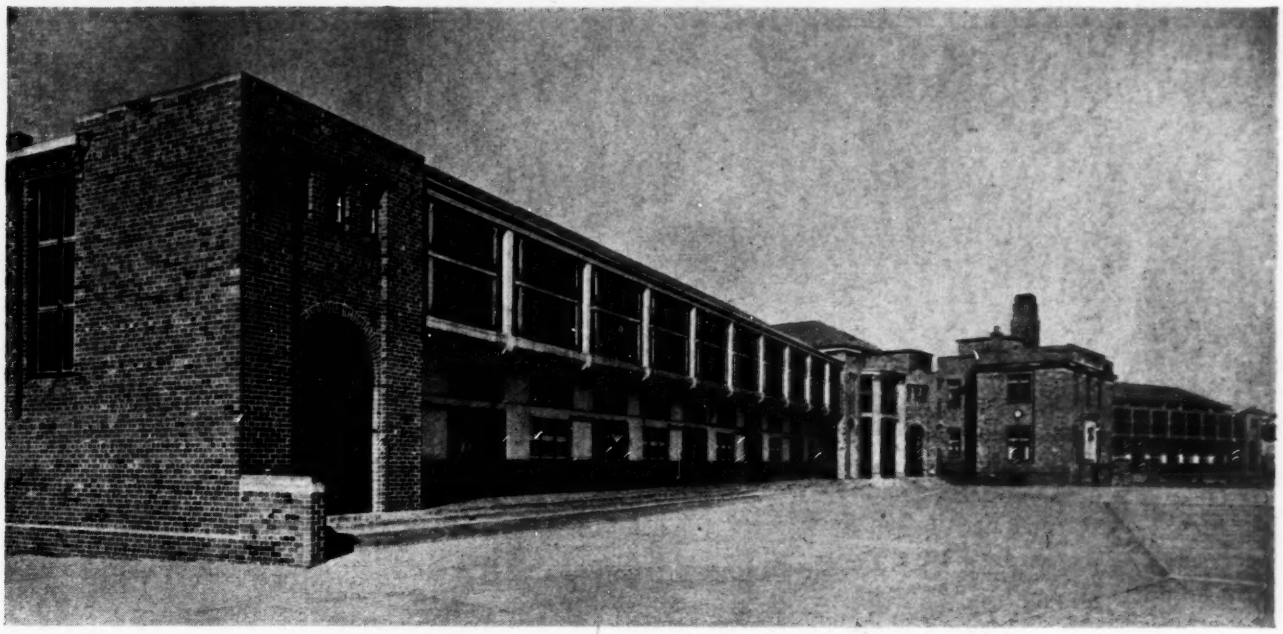
The general contractors were Messrs. Hayward and Wooster, Ltd., of Bath, and sub-contractors engaged were : Reconstructed Cotswold stone fireplaces, Gloucester Stone Co., Ltd., Gloucester; asphalting, Western Trinidad Lake Asphalt Co., Bristol; roof tiling, W. R. Davey and Sons, Bristol; wood block flooring, Stevens and Adams, Ltd.; ironmongery, N. F. Ramsay and Co., Newcastle-on-Tyne; steelwork and ornamental wrought-iron sign, Gardiner, Sons and Co., Ltd., Bristol; metal windows, Crittall Manufacturing Co., Bristol; illuminated cellar flaps, Haywards, Ltd., Bristol; ornamental iron lanterns, Osler and Faraday, Ltd.; plumbing and hot-water supplies, A. Scull and Son, Ltd., Bristol; electrical plant installation, Regent Electrical Co., Bristol; well and pump plant, J. Mullins and Sons, Bath; and sewage purification plant, Tuke and Bell, Ltd.



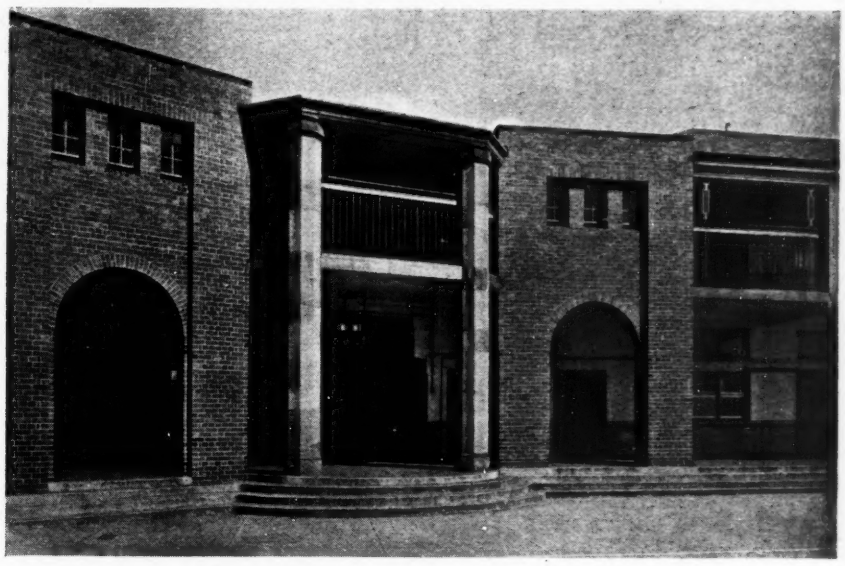
GROUND-FLOOR PLAN.

MR. ALEC F. FRENCH, L.R.I.B.A., ARCHITECT.

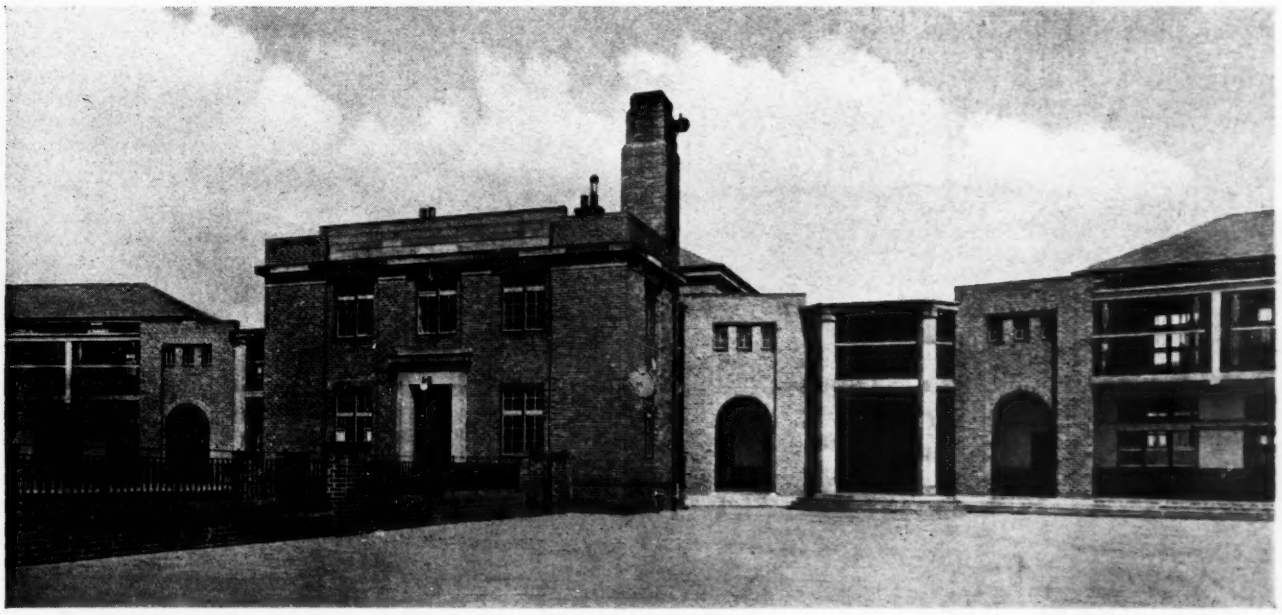
AWARDED THE R.I.B.A. BRONZE MEDAL FOR SCOTLAND.



THE MAIN FRONT, TO KNIGHTSWOOD BOULEVARD.



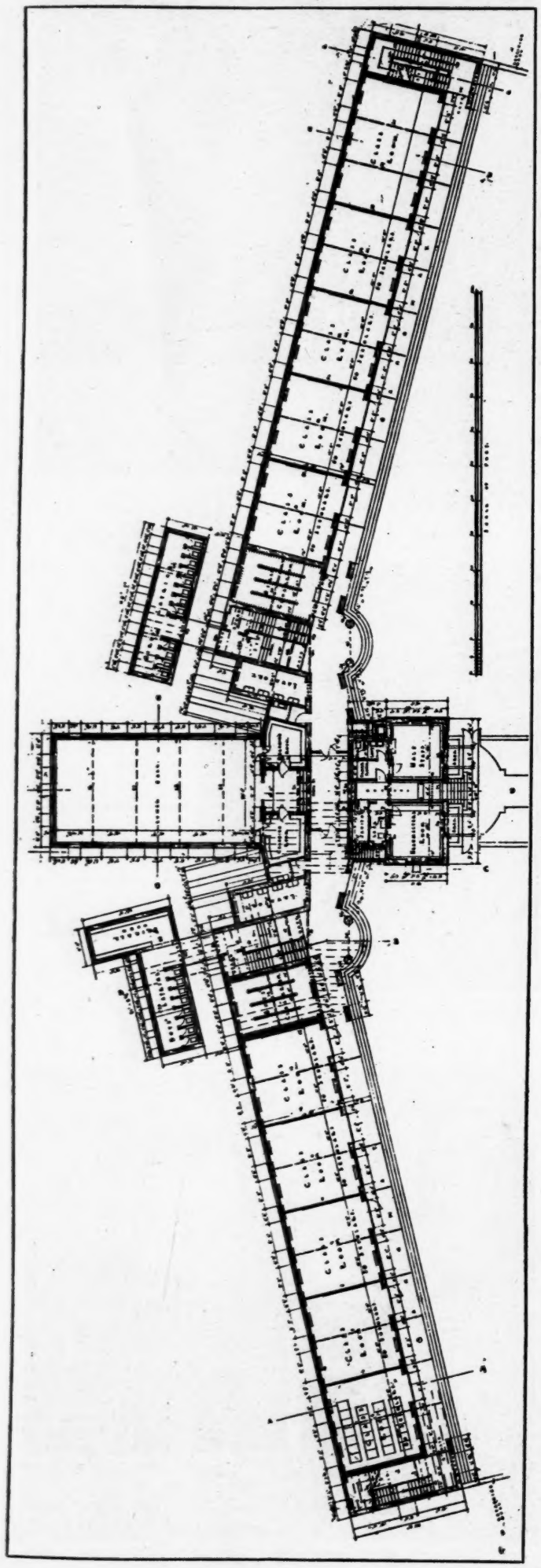
DETAIL OF MAIN ENTRANCE TO GIRLS' SCHOOL.



VIEW OF ADMINISTRATION BLOCK.

CLOBERHILL ELEMENTARY SCHOOL, GLASGOW. MESSRS. KEPPIE AND HENDERSON, FF.R.I.B.A., ARCHITECTS.

CLOBERHILL ELEMENTARY SCHOOL, KNIGHTSWOOD, GLASGOW.



GROUND-FLOOR PLAN.

MESSRS. JOHN KEPPIE AND HENDERSON, FF.R.I.B.A., ARCHITECTS.

It is announced that the Architecture Bronze Medal and Diploma presented by the Royal Institute of British Architects for a building of outstanding merit in Scotland has been awarded to Messrs. John Keppie and Henderson, FF.R.I.B.A., of Glasgow, for Cloberhill School, Knightswood, Glasgow. The award is made by a jury of assessors nominated by the Royal Incorporation of Architects in Scotland, who had under review all buildings erected during the period 1927-35 which have been nominated. This is only the second occasion on which an award has been made in Scotland, and the previous award was to Messrs. Watson, Salmond and Gray, for their extensions to the Glasgow Municipal Buildings.

It is noteworthy that on this occasion the building selected for the award is of comparatively minor importance and designed under conditions of rigid economy, it being one of a number of schools built recently by the Glasgow Education Authority.

Cloberhill School occupies an open site surrounded by streets and facing south on to Knightswood boulevard. It is in the centre of a large housing scheme and is designed as an elementary school to accommodate 1,000 pupils. Its plan is determined by the essential requirements of a modern school, namely, that it should provide the maximum of sunlight and fresh air in the classrooms and playground. It is a mixed school, and is, therefore, divided into approximately equal accommodation for boys and girls in two two-storey wings, with the administration rooms and assembly halls in the centre. The corridors giving access to the classrooms are placed on the south side of the classrooms, instead of, as usually, on the north side, these corridors, however, being treated as open gangways. In addition to the ordinary doors to the classrooms there are sliding partitions which can be pushed back, thereby giving under suitable weather conditions open-air classrooms. This arrangement affects very markedly the design of the school, and is, in fact, the characteristic feature of the external treatment at Cloberhill. The splayed line of the wings is adopted to conform to the line of streets running behind the school, so that the maximum amount of playground is obtained. The walls are faced with multi-coloured brick, and stone is used only to accentuate the entrances and centre administration block. The surveyors were Messrs. A. L. Currie and Brown.

Following were the contractors, all being Glasgow firms: A. A. Stuart and Sons, excavator, mason and brickworks; George Brown, carpenter and joiner work; J. and H. Williamson, plaster work and granolithic paving; P. and W. McLellan, Ltd., steelwork; Scottish Speedwell Co., asphalt work; City Glass Co., glazier work; Folding Gate Co., iron railings and gates; John Paterson and Co., Ltd., plumber work; P. White and Co., slater work; Wm. McKerracher, painter work; and Fletcher, Parker and McAlpine, ironmongery work.

COMPETITION FOR NEW COUNCIL OFFICES, WOOD GREEN

WINNING DESIGN: BY SIR JOHN BROWN AND A. E. HENSON, FF.R.I.B.A.

THE award of the assessors (Messrs. C. H. James, A.R.A., and S. Rowland Pierce, A.R.I.B.A.) was declared on Wednesday night in the open architectural competition for designs for proposed new Council offices and Petty Sessional Court for the Wood Green Corporation.

The award is:—

1st (£300 premium): Sir John Brown and A. E. Henson, FF.R.I.B.A., 117, Sloane-street, S.W.1.

2nd (£200 premium): Mr. Frederick F. Curtis, 12, Esplanade, Waterloo, Liverpool, 22.

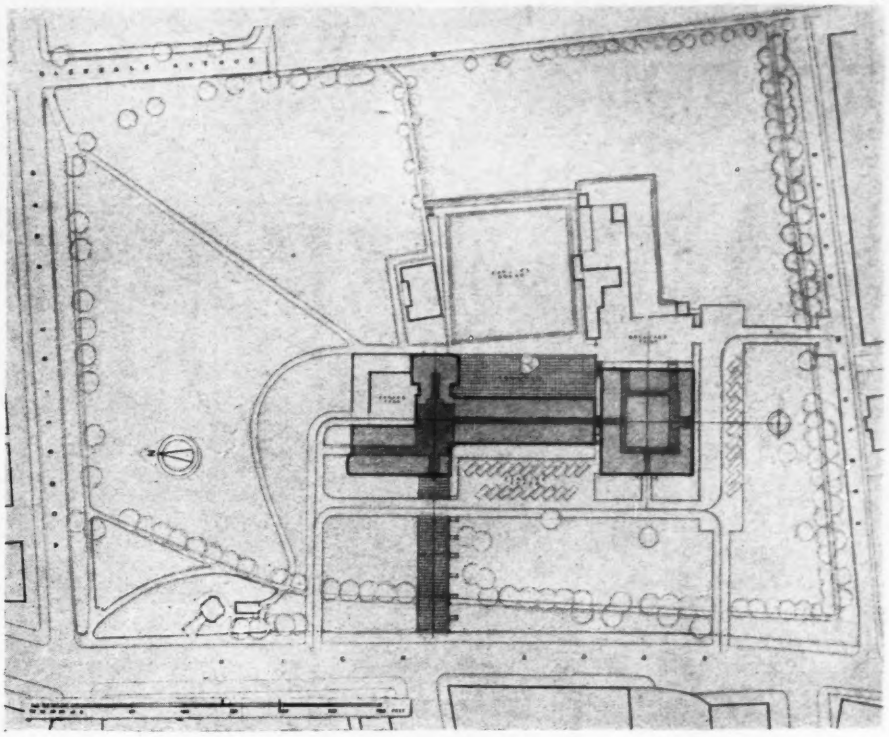
3rd (£100 premium): Messrs. Frederick Evans and F. Hamer Crossley, Dip. Arch., L'pool., A.R.I.B.A. (of Gray, Evans and Crossley), 51, North John-street, Liverpool, 2.

The Assessors' Report.

Following are extracts from the assessor's report: We have carefully examined the 102 sets of drawings received, and would like to congratulate the Council upon this excellent response. Although a number of designs reached a good standard, the final judgment proved difficult by reason of the fact that no obvious and outstanding solution was submitted. We make the following award:—

(1st) DESIGN No. 58 (SIR JOHN BROWN and A. E. HENSON).—This design is well planned in its general mass, and in site lay-out is commendable for its straightforward expression of purpose in plan and external appearance. It is, in fact, one of the few designs submitted in which a real attempt has been made to solve an asymmetrical planning problem in a manner that is architecturally well composed, without sacrificing unduly the amenities of the site; and it provides, at the same time, pleasant elevations to the east and south as well as that of the main entrance front.

Some criticisms must, however, be made, and these may be summarised as follows:—



THE LAY-OUT PLAN.

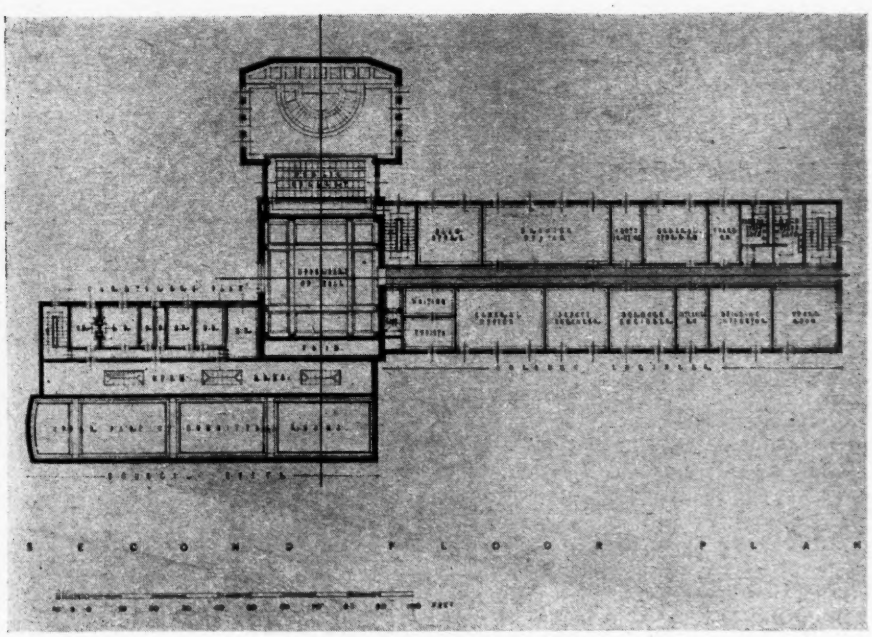
Municipal Offices. (1) The secondary entrance is too cramped and some adjustment should be made to increase it at least to the width shown on the ⅛-in. scale elevation. (The latter, it should be noted, does not agree with the plans in this respect.) (2) Some adjustments to the main staircase should be made to avoid the excessive length of the first flight. (3) The offices of the treasurer's department are inconveniently divided into two parts by the entrance hall. (4) The caretaker's quarters, although well placed, do not communicate easily with the rest of the building, particularly the second floor. (5) The small committee room is undersized and the Mayor's Parlour (in the same suite) is over-emphasised. (6) The garages and the yard have not easy staff communication with the offices. (7) The north end of the committee wing is elevationally weak and would be improved if two of the windows of the small committee room were omitted. (8) The window of the Mayor's Parlour is very squat in proportion; an increase in height would improve the elevation. (9) In general the first- and second-floor rooms of the main block are underlit, and the sizes of windows could be increased with advantage to the offices and with no disadvantage to the elevations. (10) The lift should be arranged to deliver in the same direction on all floors.

Courts Building. (11) Access to men's cells should not be through the women's cell corridor. (12) The courts are too high in section and could be lowered without disadvantage to the elevations.

The total cost of this scheme is given as £79,154.

(2nd) DESIGN No. 33 (MR. F. F. CURTIS).—This is very thoughtful and well planned, and is accompanied by well-composed elevations, which, while attractive and interesting, are not germane to this country's civic character. The drawings are a beautiful example of a method of presentation which emanates from the same Continental source.

(3rd) DESIGN No. 30 (MESSRS. EVANS AND CROSSLEY).—The chief merit of this scheme lies in its excellent allocations of separate and distinct parts of the building for the various departments; in detail planning, however, it has numerous faults, the chief of which is the long ramped approach for prisoners and the inadequate turning room allowed therein for vehicles.



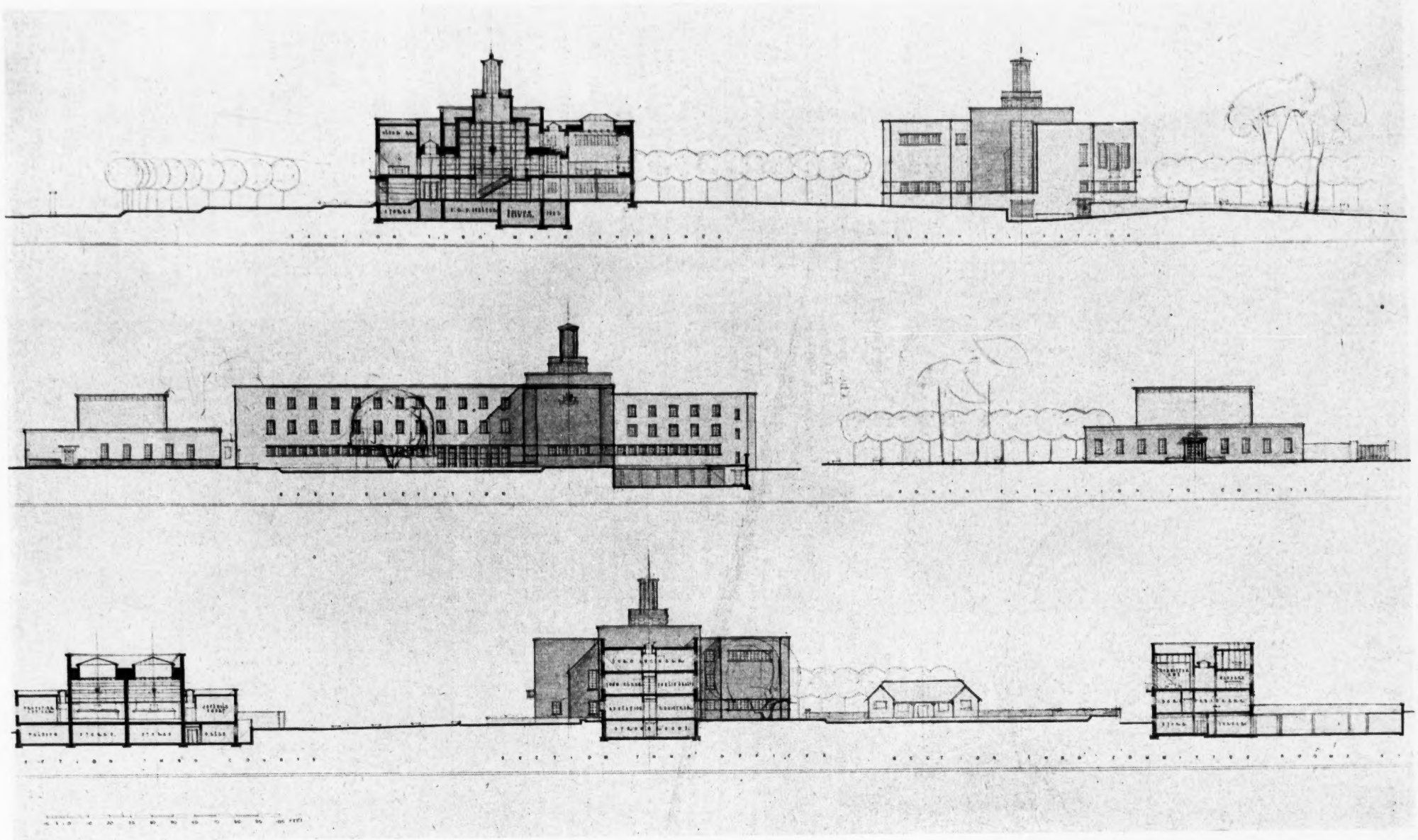
THE SECOND-FLOOR PLAN.

The Winners' Report.

Abstracts from the winners' report are as follows:—

CONSTRUCTION.—The building would be constructed with brick walls of requisite thickness (no steel framework) and the floors and flat roofs of fireproof, hollow, concrete blocks. The basement would be constructed of waterproof reinforced concrete throughout.

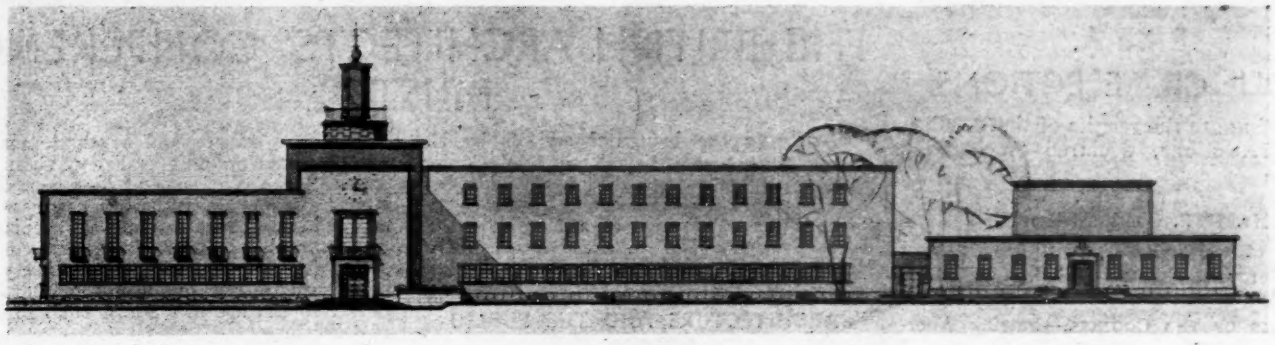
EXTERNAL FINISHES.—The main walls externally would be faced by 2½ in. buff coloured sand-faced bricks with Ketton or Weldon stone dressings.



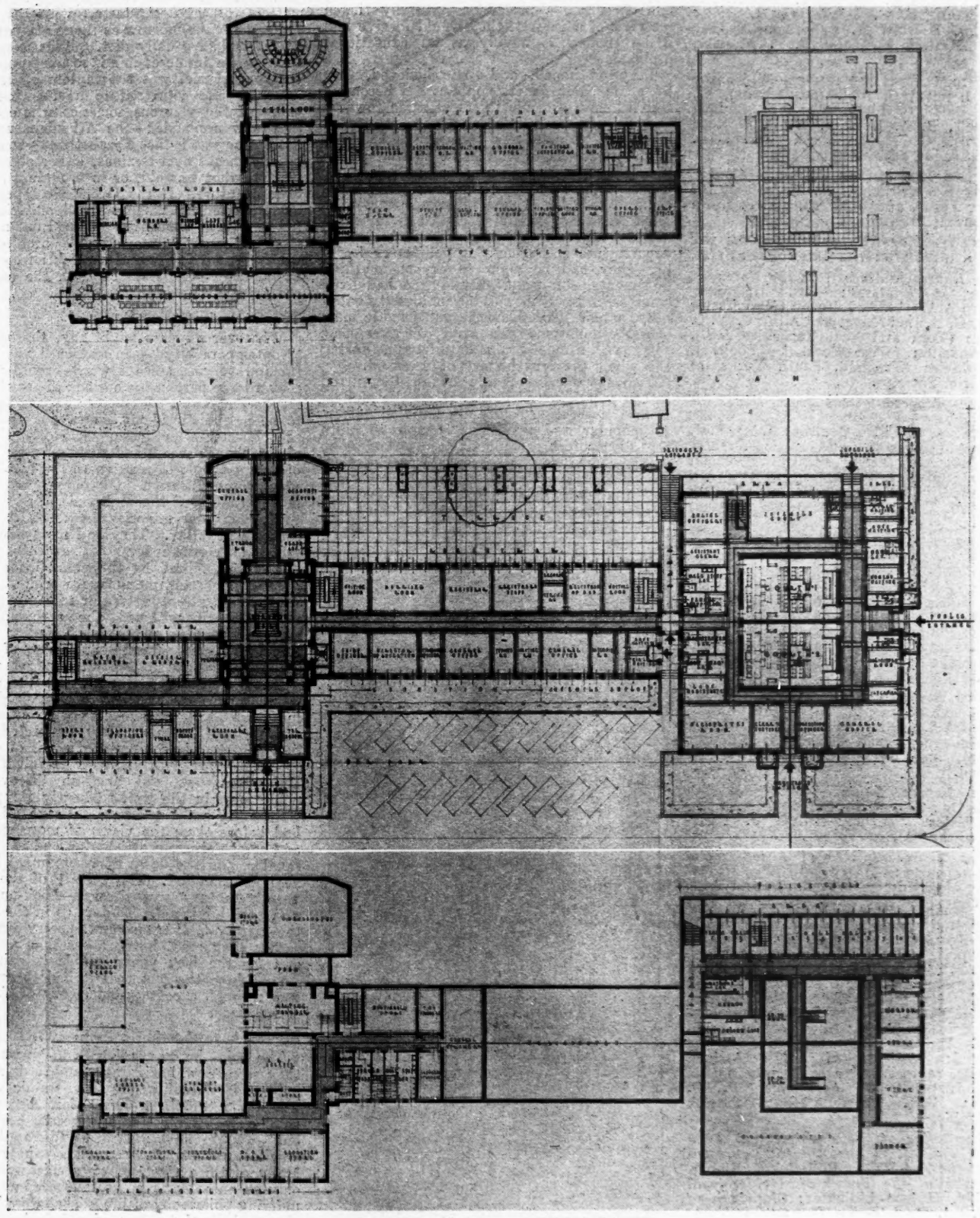
ELEVATIONS AND SECTIONS.

COMPETITION FOR NEW COUNCIL OFFICES, WOOD GREEN.

WINNING DESIGN: BY SIR JOHN BROWN AND A. E. HENSON, FF.R.I.B.A.



THE ENTRANCE ELEVATION.



THE BASEMENT, GROUND- AND FIRST-FLOOR PLANS.

COMPETITION FOR NEW MUNICIPAL OFFICES, WOOD GREEN.

WINNING DESIGN: BY SIR JOHN BROWN AND A. E. HENSON, FF.R.I.B.A.

R.I.B.A.
COUNCIL ELECTIONS

Following are the results of the R.I.B.A. Council Elections, declared on Monday night:—

PRESIDENT.

Mr. H. S. Goodhart-Rendel.

PAST-PRESIDENTS.

Mr. Percy E. Thomas, O.B.E. (Cardiff).
Sir Raymond Unwin, Hon. LL.D. (Man.).

MEMBERS OF THE COUNCIL.—Patrick Abercrombie, Robert Atkinson, E. C. Bewlay (Birmingham), A. C. Bunch (Warwick), C. Cowles-Voysey, Joseph Emberton, E. Stanley Hall, Stanley Hamp, G. N. Hill (Manchester), Charles H. Holden, T. Cecil Howitt (Nottingham), E. B. Maufe, C. H. Reilly (Brighton), Howard M. Robertson, Sydney Tatchell, Maurice E. Webb, E. P. Wheeler, and G. Grey Wornum.

ASSOCIATE MEMBERS OF COUNCIL.—W. Naseby Adams, Percival C. Blow (St. Albans), W. Austin Daft (Oxford), Wesley Dougill (Liverpool), R. A. Duncan, W. G. Holford (Liverpool), C. A. Minoprio, Norval R. Paxton (Leeds), and E. Berry Webber.

LICENTIATE MEMBERS OF COUNCIL.—Stanley A. Heaps, Sir William F. V. M. Milner, Bt. (Skipton, Yorks, and London), and S. Lunn Whitehouse (Birmingham).

REPRESENTATIVES OF ALLIED SOCIETIES IN THE UNITED KINGDOM OR THE IRISH FREE STATE.

(1) *Six Representatives from the Northern Province of England*: — G. H. Gray (Northern A.A.), W. A. Johnson (Manchester Society), H. A. Dod (Liverpool A.S.), C. W. C. Needham (York and East Yorkshire A.S.), F. L. Charlton (West Yorkshire Society), W. G. Davies (Sheffield, South Yorkshire and District Society).

(2) *Five Representatives from the Midland Province of England*:—S. N. Cooke (Birmingham and Five Counties A.A.), E. J. Williams (Leicester and Leicestershire Society of Architects), Basil C. Deacon (Northamptonshire, Beds. and Hunts A.A.), W. G. Watkins (Notts, Derby and Lincoln A.A.), and Leslie Barefoot (East Anglian Society).

(3) *Six Representatives from the Southern Province of England*:—J. C. C. Bruce (Devon and Cornwall A.S.), C. W. Pike (Wessex Society), G. Hastwell Grayson (Berks, Bucks and Oxon A.A.), A. L. Roberts (Hampshire and Isle of Wight A.A.), H. P. G. Maule (Essex, Cambs, and Herts Society), and one representative to be nominated by the Council of the South-Eastern Society.

(4) *Four Representatives of Allied Societies in Scotland*, nominated by the Council of the R.I.A.S.:—Norman A. Dick (Glasgow), G. G. McLean (Glasgow), Charles G. Soutar (Dundee), and one representative to be appointed.

(5) *One Representative of Allied Societies in Wales*, nominated by the Council of the South Wales Institute:—Oliver S. Portsmouth (Swansea).

(6) *Two Representatives of Allied Societies in Ireland*:—Harry Allberry (Royal Institute of Architects of Ireland), and T. R. Eagar (Royal Society of Ulster Architects).

Representatives of Allied Societies in the British Dominions Overseas, nominated by the Council of each of the following:—Royal Architectural Institute of Canada, H. L. Fetherstonhaugh; U.K. representative, E. Stanley Hall; Royal Australian Institute of Architects, A. S. Hook; U.K. representative, Maurice E. Webb; New Zealand Institute of Architects, representative to be nominated; Institute of South African Architects, representative to be nominated; Indian Institute of Architects, P. P. Kapadia; U.K. representative, Patrick Abercrombie.

Representative of the Architectural Association (London), Verner O. Rees; *Representative of the A.A.S.T.A.*, Roderick C. Fisher.

Chairman of the Board of Architectural Education, Hubert Lidbetter; *Chairman of the R.I.B.A. Registration Committee*, T. A. Darcy Braddell; the *Chairman of the R.I.B.A. Official Architects' Committee;* and a *Representative of the R.I.B.A. Salaried Members' Committee.*

THE BRITISH ARCHITECTS' CONFERENCE, BRISTOL

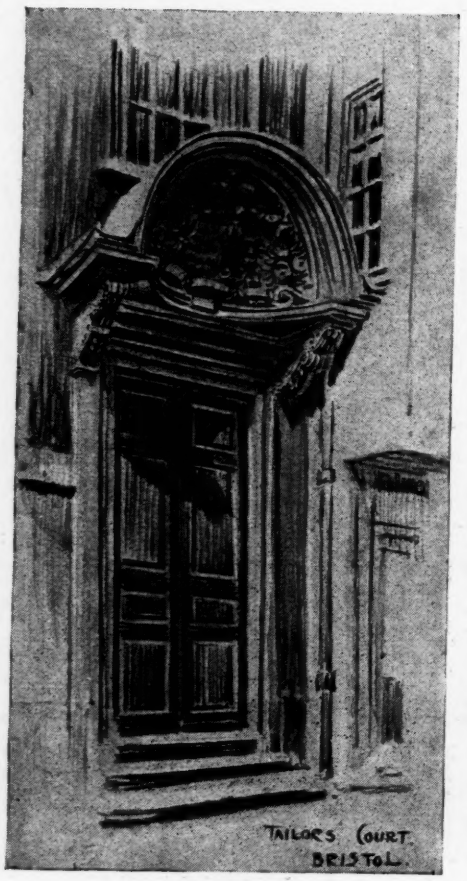
FOLLOWING the inaugural address by the President at the British Architects' Conference, Bristol (see page 1219), two addresses, "Architecture and the Public To-day" and "The Public Buildings of a Modern City," were given by Mr. J. E. Barton, M.A., Hon.A.R.I.B.A., and Mr. E. Berry Webber, A.R.I.B.A., respectively.

ARCHITECTURE AND THE PUBLIC TO-DAY.

MR. BARTON began by saying the topic allotted to him was presumably suited to one who was a layman in matters architectural: and as a man's profession naturally tinged his view of a subject, they would forgive him if he treated it mainly as an educational problem.

They all hoped, and some believed, that even the older general public was becoming a little more sensible in its attitude towards the present-day architect, who attempted new forms to meet new economic or spiritual needs. But they would agree that in public æsthetics, perhaps more than in any other sphere, hope lay with the younger generation. When men of the speaker's years were faced with any affair of visual judgment—however discreet they might be in their own departments of business or politics or learning—they had no right to expect anything but mental confusion. Those who had lived from 1878 to 1938 had accumulated, willy-nilly, a more heterogeneous and chaotic mass of æsthetic notions than could ever have come together, in one brain or lifetime, during the whole previous history of mankind.

Two bewildering revolutions had occurred in the past hundred years. First the plunge, from a civilisation compactly built on universal popular and traditional handicraft, into the abyss of early industrialism. And now, in their own day, all over the world, they saw the efforts of a new style to get itself born: a style which aimed to assert humanism, and the eternal principles of unity and proportion, not in spite of, but by use of, mechanistic science and synthetic materials. An American philosopher had written a book called "The Varieties of Religious Experience." Some such title might well be adapted to the miscellaneous architectural, plastic and pictorial experience of sexagenarians, now surviving in a society whose more progressive outlook and spirit were nearer to the age of Pericles than to the age of Gladstone.



TAILORS' COURT, BRISTOL
DRAWN BY A. C. FARE, R.W.A., A.R.I.B.A.

The speaker recalled the time when every new work of art was greeted with the test question, "Will it last?" To-day it was rather the fashion to enjoy or reject, in matters of æsthetic taste, with as little thought for the morrow as if such things were no more than a daily diet. Was it possible that such a frame of mind, so far from being purely barbaric, was a symptom of creative health? He confessed to a suspicion that many of the vigorous societies whose works they now applauded—the Athenians and the Florentines and the Elizabethans—were not by any means over-anxious, either about conserving what was old, or in providing for the distant future. If the Greeks had possessed modern scientific resources and materials, he felt sure they would have turned out a rapid succession of "temporary" architectural works; but every one of those brief creations would have been stamped with the essential character of Greek art.

The Outlook of Youth.

Whatever scholars might say, the sense of "contemporaneity"—an awkward but a useful and very significant word—would always play a large part in the outlook of healthy and responsive youth. Whenever he was tempted to be pessimistic about education, as every schoolmaster sometimes must be, he thought of the change which had come over the minds of young people in relation to the whole field of visible civilisation. Of course, he was not now speaking of the multitude. He referred to the leavening minority, in whose hands the future always lay. They had to-day an ever-growing constituency of ardent young imaginations, fired by the possibilities of an immensely better man-made world. Those people were not æsthetes nor romanticists nor escapists. They loved the aeroplane, the modern steamship, the lines of the fine car or locomotive, the formal austerity of huge industrial designs in concrete and steel and glass. They followed with zest the stimulating inventions of the best film producers, in an art which for swiftness of evolution had shown itself unique. They connected their living interest in present-day works of plastic or graphic art with an eager re-valuation of the old masters, and a fresh discovery of noble form in the works of early Egypt and China and archaic Greece. Above all, they had before them the vision of more spacious and serene cities, promising an end of the old squalor, and the dawn of a communal happiness for mankind. The culture of the nineteenth century was literary—book-nurtured and book-blinkered. To-day, as in the age of the mighty Gothic outburst, poetry was seen rather than read, built rather than written; and for the best young minds it gained in appeal from the fact that it had to push its way through a century-old legacy of obsolete conventions.

Approach to Aesthetic Problems.

The point he was trying to make was that they were now beginning to breed a new public for architecture; a public which would be worth working for, because it not only would enjoy good buildings, but would have learned to apply an architectural standard to all its judgments. Many of them thought of architecture not only as an art and a profession, but as a unifying philosophy of life. That was the line along which the newer educated thought of their day was developing.

Not long ago he heard a distinguished artist say that in America, where he was

brought up, improvements in public art were largely the result of a widespread belief in hygiene. That struck the speaker as a suggestive observation. It implied that architectural and art education, for the mass of present-day mankind, was more likely to succeed by flank strategy. Direct approach to æsthetic problems, when they were dealing with their generous-hearted and muddle-headed adult public, was extremely difficult. If they talked of cleanliness, labour-saving, air and light and space for the children, they had a common ground of approach. Compare the bank-holiday crowd of their day with what it used to be, and they must admit the advance in some very personal aspects of popular taste. Common-sense æsthetics, in the way of shedding needless encumbrances, were making headway. The use and love of machinery had a share in that progress. However little he might analyse his impressions, the average man could hardly fail to know that any contemplative pleasure he got from a good motor-car was concerned with functional design and not with superfluities. The thrill of speed and power, the spreading cult of physical fitness, and the feeling for rhythm and balance in the playing of games, were all contributing to a more sensible point of view. There was something to be said even for the economic stress which now forced most of them to desist from expensive and unnecessary frills in their homes.

But, unluckily, so soon as they turned to that region of so-called "art," which the masses persisted in regarding as mysterious and sacrosanct, they stumbled on a bog of tenacious superstitions. Many cities were familiar with the arguments and newspaper controversies that were stirred by such projects as new municipal buildings. Is brick as dignified as stone? Can civic pride be fittingly domiciled in a structure that looks bare, like a factory? Is it not impious to cut down trees for the more blatant exposure of merely human efforts such as architecture? He recalled one writer to the Press who opined that *all* buildings were better seen through a veil of natural vegetation. No doubt in other ages the creative artist had to contend with the reluctance of untrained minds to distinguish clearly between works of Nature and the works of man. Instead of seeing that the one sort of beauty should supplement and set off the other, it had been the habit of the unregenerate to believe that art and Nature should indulge in mutual contamination. Even before Wren was in his grave they had gentry who embellished their estates by adding "Gothick ruins," complete with ivy. The nineteenth century only went further in providing unlimited scope for such romantic confusion.

Continuing, the speaker said: "It seems almost a pity that the words 'art' and 'architecture' have to go on being used. The mass of our public is not frequently given to entering art galleries, nor to inspecting great public buildings: but when it has occasion to make such visits, you may notice that the majority always assume what they feel to be a suitably ecclesiastical demeanour. Their very faces are changed. They seem to be saying to themselves: 'We have now left normal life behind. We must not judge these things as we should judge familiar pursuits or commodities. We submit ourselves to be impressed by costly and sacred elaborations, which we view with distant and uncomprehending respect, because we have been vaguely informed that they are good for our souls.'

False Veneration.

"One of the first steps in art education is to break down this museum complex. You should take every opportunity of trying to convince people that false veneration is the worst enemy of real taste. Why is it that a severe modern building, or a somewhat abstract work of architectural sculpture, will cause resentment or even rage in a crowd of nice quiet people who in their own lives have not given one consecutive hour to serious study of the arts? I have no doubt at all that such disturbances are psychologically similar to the religious riots that break out among peaceful primitive races. Nothing is more inflammable than a mixture of respectable custom, irrational sentiment and gross ignorance. Everywhere to-day you find a type of mind which in most things is fairly reasonable, but which seems to abandon all logic when it touches any question of the architectural arts. The person who is innocent even of rudimentary ideas about design or craftsmanship will trust himself to that most dangerous of spiritual guides, the habit of association. If you are an associationist, you can be persuaded to a semblance of devotion by any sham-Gothic eruption of pinnacles and crockets, however bad. The same habit will work the other way round, in resistance to new visual experiences. Numbers of men, well educated in the school sense, are hazily convinced that cubism and communism are more or less the same thing. . . .

"A good writer has said that 'as we grow older, we realise that platitudes are true.' Personally, I hold that in architectural education you are justified in pushing the functional creed for all it is worth. If you emphasise the bearing of good design on health, social welfare, convenience, business efficiency and civic patriotism, you are likely to get more and more of a hearing. The notion of town and regional planning is beginning to seize on the popular imagination. As soon as the public ceases to think of architecture in terms of the isolated building and begins to conceive of larger relations and organised schemes, it will unconsciously have moved a little towards the principles and emotional value of design itself.

ALFRED HOUSE, BATH

DRAWN BY A. C. FARE, R.W.A., A.R.I.B.A.

Standardised Cosmopolitanism.

"In architecture, as in all the higher professions, we need a liberal sprinkling of ruthless young men and uncompromising purists. Their provocation is essential. But in the present state of our civilisation the main body of progressive designers are doing the right thing when they proceed by instalments. After all, we live on an island, most of whose inhabitants have never been outside it. As a race, we shall never be converted to any sort of standardised cosmopolitanism, though it might be well if visits to half a dozen leading cities of Europe were among the necessary qualifications for membership of any British municipal body. On the Continent itself some of the more interesting architectural centres suggest that new constructive ideas can be reconciled with local feeling about materials and their treatment. This feature struck me on a recent visit to Amsterdam, where impressive areas of new brick architecture seem to be permeated by a sane modernity. . . .

"I think you will agree that any effort to quicken public interest in architecture should avoid a too specific inculcation of 'modernism.' In the realm of domestic equipment we already see how possible it is to work up a vogue for the modernistic, with results that are sometimes excruciating. A change of vogue is not a change of heart. No true æsthetic conversion has been achieved when you induce people to forsake their bulbous Victorian curves for crudely angular abortions which pretend to embody a contemporary style. It is a depressing fact—common to all the arts in these days—that every sincere experiment in new form is exploited and cheapened by stunt-merchants. The pseudo-modern is worse than the pseudo-antique, because it is more insidious. It obscures the basic truth that good design, in any age or in any style, can only proceed from an individual who is personally an artist. Fundamentals of good building or good furniture are only too readily neglected when people are carried away by novel mannerisms, and fancy themselves to be in the latest intellectual or artistic trend."

Concluding, the speaker said: "Some of us are optimists, because we believe that the present indifference of our general public to the art you practise is a result of perplexity rather than of emptiness or shallowness. In the country which created Lincoln Cathedral and the city of Bath, is it too much to hope that a dormant popular intelligence may gradually be re-awakened, in response to the ardour of those who still cherish, and carry forward into new developments, the English architectural tradition?"

PUBLIC BUILDINGS OF A MODERN CITY.

Mr. Webber began his address by pointing out that the present-day need was not so much the provision of public buildings for a modern city, as the provision of modern public buildings for our ancient cities. The demands made upon public authorities throughout the country and their increasing activities had rendered existing accommodation inadequate and obsolete. Consequently, the problem involved was not the design of something new in an ideal setting, but more often a question of remodelling and expansion within a built-up area. In the past, failure to visualise future expansion had presented us with the difficult and costly situation of to-day. If we were to avoid this error, we should have to be more long-sighted than our forefathers.

He would advise local authorities who were contemplating expenditure on new public buildings to submit their proposals to the test of this question: "Could the proposed new work be absorbed into, or form the nucleus of, a comprehensive scheme of building embracing the whole of the authorities' civic activities? If not, you are wasting your money."

The speaker went on to describe the post-war efforts to concentrate all the activities of local government into a coherent civic centre which was not only economical and efficient, but had a very great moral effect as well. Good citizenship was fostered by civic pride, and a city was largely judged by its buildings. He then described the component parts of a civic centre and their relationship to one another; and touched on the main planning problems of each unit. He also discussed the problem of car-parking, which he thought had rarely been tackled satisfactorily.

After emphasising the necessity of bringing in the architect in the earliest stages, instead of presenting him with a site and a set of conditions which circumscribed his activities and gave no scope for the exercise of his specially trained ability to advise on the whole subject, the speaker concluded with a plea for dignity and appropriateness in the design of our public buildings, pointing out the lasting quality of these important buildings, which set the tone of the whole city for generations to come.

LONDON BUILDING BY-LAWS—XVII

By ALFRED H. BARNES, F.R.I.B.A., M.I.Struct.E., and C. ROLAND WOODS, M.B.E., LL.B.

PART IV.—SECTION 3.

RULES AS TO PERMISSIBLE STRESSES IN WALLS AND PIERS.

HAVING set out in Section 2 a set of empirical rules for the construction of walls, together with the conditions governing their application, the by-laws give in Section 3 a separate alternative set of rules consisting of data upon which the constructor is free to design his walls and piers on a basis of calculated stresses untrammelled by the prescribed conditions governing the construction of walls under the empirical rules of Section 2, although, of course, he is necessarily subject to the general requirements of Section 1.

The would-be purely scientific designer finds at every turn that some essential data are not available owing to the fact that building science has not yet nullified the long start that history has given to its elder partner, building practice. This is very apparent in questions relating to masonry. It will, therefore, not be surprising if, in considering the rules as to the permissible stresses in walls and piers, we meet with occasional requirements of a purely empirical nature, and, in some cases, find that it is even profitable for the designer to revert to the avowedly empirical rules and the appropriate conditions laid down in Section 2.

In this connection it is important to note that by-law 50, requiring walls and piers to comply with the requirements of either Section 2 or Section 3, does not refer to the walls and piers of a building as a whole, but relates to "*a* wall or pier," thus leaving it permissible, if desired, to calculate a wall or a pier where stability is the governing factor and to employ the empirical rules where the general requirements of Section 1 show other considerations to be paramount.

Walls and Piers in Combination.

The rules for the calculation of walls and of piers differ to some extent. It is, therefore, necessary to distinguish between the two. This has been done in a general way in the definitions of "*length*" and "*width*" in by-law 1. A complication arises, however, when masonry, which under the definition would be a pier, is in combination with what would be a wall. The question, then arises: Under what conditions is such a combination to be regarded as a wall or as a pier?

Any such combination of wall and pier may occur either vertically, as shown in Fig. 1, or horizontally, as in Fig. 2. By-law 58 requires that where such combination is vertical—that is, where the wall and the pier in the same storey-height are situated one above the other (Fig. 1)—the actual pier, plus the walling immediately above or below, is to be regarded as a *pier* throughout the storey-height in which such combination occurs. When the combination is horizontal—that is, when the pier forms on plan a projection from the wall (Fig. 2)—the by-law decides on a basis of proportion whether the combination should be regarded as a pier with a wall or walls attached to it, or whether it should be deemed to be merely a thickening of the wall. When the projection is on one side of the wall only, and the projection p does not exceed one-quarter the thickness t, the projection may be regarded as merely an additional thickness to the wall; otherwise, if p exceed one-quarter of t, then the combination must be regarded as a pier with walling attached thereto. Where the projection appears on both sides of the wall, for the projections to be regarded as walling the total projection $p+p$ must not exceed one-third of t (the thickness of the wall), otherwise the projecting portion, plus the intervening walling, must be deemed to be a pier.

In all questions of a combination of a pier plus walling above or below it, due regard must be had to what constitutes the storey-height as defined in by-law 1. Taking, for example, the pier supported by the wall and in turn supporting another wall, as shown in Fig. 1, assuming that the lateral support in the one direction is afforded by the undersides of the two floors resting on the wall, lateral support is afforded the pier in the other direction by the walls themselves, so that when considering the stability in the direction of the support afforded by the floors, the storey-height of the pier must be taken as the portion of the masonry extending from the soffit of one floor to the soffit of the other (as indicated by the dotted lines), yet when considering stability in the direction of the horizontal support afforded by the walls, the storey-height for that purpose is the height of the window openings.

The importance of this will be apparent when the next by-law is considered.

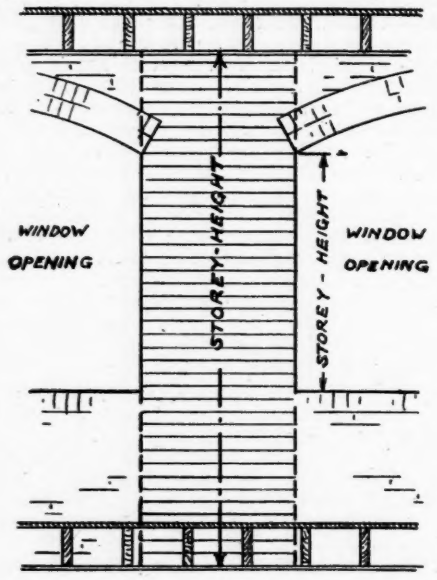
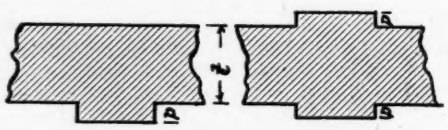
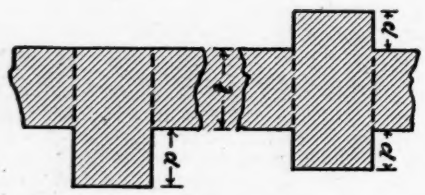


FIG. 1.



COMBINATION DEEMED TO BE WALLING.



COMBINATION DEEMED TO BE SEPARATE PIERS AND WALLING.

FIG. 2.

Slenderness Ratio.

By-law 59 explains the "slenderness ratio" of any storey-height of a wall or pier to be the "*effective height*" (a term which will be discussed presently) divided by that horizontal dimension of the wall or pier which lies in the direction of the lateral supports determining the storey-height. Referring to Fig. 1, there are, therefore, two slenderness ratios in relation to the masonry depicted therein, one being the total effective height divided by the horizontal dimension of the pier measured in direction of the floor joists (which gives the pier lateral support in the direction of their lengths) —in other words, divided by the thickness of the wall; and the other slenderness ratio being the effective height of the pier extending from the bottom to the top of the window opening, divided by the thickness of the pier measured in the direction of the plane of the wall.

Before pursuing further the discussion of the particular case in Fig. 1, it will be necessary to observe what is intended by the term "effective height."

By-law No. 59 tells what is necessary with regard to "effective height" by giving four evaluations of effective height, two for walls and two for piers, the first being the case when lateral support is at the bottom only, as, for instance, in the case of the topmost storey-height of a wall of a building, whereof the roof is a wood flat the joists of which run parallel to the wall and afford it no lateral support; the second being such a case, as is shown in Fig. 1, wherein the wall and pier combination is supported laterally both at the bottom and top by floors.

The values given in by-law No. 59 for the effective heights are as follows:—

(*a*) For a wall without lateral support at the top, the effective height = 1½ times the storey-height.

(*b*) For a wall with lateral support at the top, the effective height = ¾ of the storey-height.

(*c*) For a pier without lateral support at the top, the effective height = twice the storey-height.

(*d*) For a pier with lateral support at the top, the effective height = the storey-height.

The cases (*b*) and (*d*) are, of course, the most common. The case of (*c*) is not frequently met with. A pier with no lateral support, except at the base, would be found only in such instances as a masonry pedestal supporting the base of a stanchion, and the case is even less frequent where the pier is supported at the top in one direction only, as is to be found when a detached pier supports the end of a single beam. In such a case the pier comes under category (*d*) when considering its horizontal dimension parallel to the beam, and under category (*c*) when considering its dimension at right angles to the direction of the beam.

In order to ascertain a slenderness ratio of a masonry unit, it is necessary, in the first place, to determine whether it be a wall or a pier as defined by by-laws Nos. 1 and 58, and then to observe whether it will have effective lateral support at the top in the direction corresponding with the particular slenderness ratio under consideration. This will determine whether it comes under category (*a*), (*b*), (*c*) or (*d*).

Having placed the unit in the proper category, the next process is to ascertain the "effective height," which will be, in the case of (*a*), 1½ times the storey-height,

(*b*) ¾ of the storey-height, (*c*) twice the storey-height, or (*d*) the actual storey-height, according to the category of the unit.

Then, by dividing the effective height by the horizontal dimension of the unit, measured in the direction of the lateral support which determines the storey-height, the slenderness ratio is obtained.

It will probably have been observed, since every pier has both width and thickness and either is, or is not, laterally supported at the top in each of those two directions, that every pier has two slenderness ratios. Indeed, so has a wall, but, as will be gathered after further consideration of this matter, the slenderness ratio of a wall in respect of the direction of its length is seldom a matter of any moment.

(*To be continued.*)

THE POWERS OF THE QUANTITY SURVEYOR—

XXIV

By W. T. CRESWELL, K.C., Hon.A.R.I.B.A., A.S.I., etc., assisted by NORMAN P. GREIG, B.A., Barrister-at-Law.

DISCHARGE OF CONTRACT.

It is expedient that a quantity surveyor should be familiar with the various ways in which a building or engineering contract can be discharged, particularly as a great part of his duties are concerned with matters arising out of these contracts.

It need only be mentioned that the most usual and normal method of discharging such contracts is by the complete performance of their terms by the parties to them. In this connection it may be observed that, though building and engineering contracts are a special branch of general contracts, the Court will not, as a general rule, grant specific performance of them; hence, generally, the remedy of the injured party, where such a contract has been wrongfully terminated, is an action for damages for breach of the contract. It is not every breach that discharges a contract. For instance, one party may decline to go on with it and is excused from going on with it where the other party renounces it or refuses to perform it, and he may treat the contract as at an end.

A building or engineering contract may be discharged by rescission as by mutual agreement between the parties so to do. Such agreement unmakes the contract, and, in this case, if neither the employer nor the contractor has performed any part of the contract work, there is no necessity for a new consideration for what is, in effect, a new contract, namely, the agreement to rescind. But should one of the parties to the contract have performed his part of the contract works (by which, generally, is meant that the contractor has carried out the contract works), what amounts to a release must be supported by a new consideration which, when executed, is termed an accord and satisfaction. If the contract was by deed, no consideration was at any time necessary.

It sometimes happens that a simple contract (that is, one arising from an offer and acceptance accompanied by valuable consideration) is afterwards put into the form of a deed, an operation known as "merger." The effect of this is to discharge the original contract.

By operation of law, an order of discharge in bankruptcy releases a party from all debts prevailing. An alteration made by one of the parties to a written contract, by addition or erasure in a material part, unless made by mistake, discharges the contract.

A building or engineering contract may be determined by an act or default of one party to the contract which, by the terms of the contract, is to have that effect. The 1931 Form of Building Contract, for instance, in clauses 22 and 23, provides for the determination of the contract, on certain circumstances arising, by the employer or contractor, as the case may be. Clause 22 provides that default on the contractor's part by wholly suspending the works before completion, by failing to proceed with the works with reasonable diligence, or by refusal or persistent neglect on the contractor's part after notice in writing from the architect to remove defective work or improper materials, shall, under the circumstances stated in that clause, result in the contract being determined by the employer; the bankruptcy of the contractor being a further reason, under the same clause, for the determination of the contract. Clause 23 provides that the contractor may determine the contract on non-payment by the employer of the amount due to him under the architect's certificate, by reason of interference with or obstruction of the issue of such certificate; or by the employer committing an act of bankruptcy. A further reason for the determination of the contract by the contractor is if the whole (or a substantial part of the works) is delayed under the circumstances therein described. The clause describes the respective rights and liabilities of the parties in the case of such events occurring. The Form of Sub-contract issued in 1936 under the sanction of the National Federation of Building Trades Employers, and the National Federation of Specialists and Sub-Contractors, and recommended by the Royal Institute of British Architects for use in connection with the 1931 Form of Building Contract, contains a clause (21) providing for the determination of the sub-contract by the contractor (the employer under the sub-contract) in similar terms to clause 22 of the 1931 Form, though, under this latter clause, the default, to have the effect of determination, must continue for 14 days after written and registered notice to the contractor from the architect, while in the case of the sub-contract, ten days is the period, after written and registered notice from the contractor to the sub-contractor.

Unexpected difficulties met with in the progress of the contract work do not permit of the builder abandoning the work and hence throwing up his contract, but it is sometimes an express or implied term of a contract that its performance is to depend upon the fact that such is not rendered impossible. Generally, impossibility of performance must mean a physical or legal impossibility and have no relation to the capabilities or circumstances of the person contracting to do certain work. Where, however, serious impediments, not due to the action of the employer, and which are not, nor could be, in the contemplation of the parties at the time when the contract was made, are discovered, and are of such a nature as to alter both the character of the work and render the special conditions embodied in the contract inapplicable, it would be a matter for the Court to determine whether the contractor should be relieved, in those circumstances, from his obligations under the contract, or be made to suffer mere nominal damages for breach of contract.

A contract may be discharged when a state of war, or a proclamation declaring the circumstances flowing from a state of war, is declared between two countries to which the parties to the contract belonged and which, as a result, renders the contract impossible of performance.

(*Concluded.*)

Timber Houses in Scotland.

Their Majesties the King and Queen on their recent visit inspected two timber houses just completed at Carfin Hall, Lanarkshire, on behalf of the Special Areas Housing Association. The houses are semi-detached bungalows, each containing a living-room, two bedrooms, bathroom, scullery and larder. They were begun on April 4, and are equipped with all the usual modern conveniences.

One of the bungalows has been placed at the disposal of the Council for Art and Industry, who will furnish it to illustrate that serviceable yet tasteful furniture and furnishings are obtainable at a low price. These houses are the forerunners of others to be erected in large numbers by the Association in the Special Areas of Scotland.

BUILDING STATISTICS

FIGURES FOR MAY.

Employment.—According to the current issue of the "Ministry of Labour Gazette," employment continued to improve during the period April 4 to May 16, and was fair on the whole. Compared with a year ago, however, there was a slight increase in the numbers unemployed among all classes of workers. As regards individual occupations, employment was moderate with slaters and tilers, and fair with other classes of skilled operatives. With labourers to skilled occupations and builders' labourers, employment was moderate; there was, however, a considerable amount of unemployment among navvies and general labourers and certain other occupations. At May 16, 126,601 insured persons were unemployed (including 3,953, who were temporarily stopped), a percentage of 12.2. This was .5 per cent. better than for the month before, but 1.2 per cent. worse than the figure of a year ago.

Building Plans Approved.—Returns as to the estimated cost of buildings for which plans were approved during May have been received from 142 local authorities (representing towns with a population of 17,545,000 in 1931). The returns show that, in May, 1938, plans were passed for buildings with an estimated cost of £9,045,900, compared with £9,095,400 in May, 1937. This represents a decrease of .5 per cent.

Comparison of various classes of building is as follows:—

	May, 1938.	May, 1937.
Dwelling-houses ...	£6,103,800	£5,724,400
Factories and Workshops	389,900	596,300
Shops, Offices, Warehouses, etc. ...	610,200	707,100
Churches, Schools and Public Buildings	973,500	684,500
Other Buildings, and Additions and Alterations ...	968,500	1,383,100
	£9,045,900	£9,095,400

FIGURES FOR APRIL.

In last month's issue of the "Gazette," figures were given for 143 local authorities in respect of plans approved during April, 1938. Returns for the latter month are now available for all of the 146 local authorities covered by the Department's inquiries (representing towns with a total population of 17,864,000 in 1931). The estimated cost of the building included in the returns was £8,358,800, compared with £8,682,700 in March, 1938, and £10,977,400 in April, 1937. Of the total for April, 1938, dwelling houses accounted for £5,336,900; factories and workshops, £505,400; shops, offices, warehouses and other business premises, £731,500; churches, schools and public buildings, £745,800; other buildings, and additions and alterations to existing buildings, £1,039,200. The number of dwelling houses for which plans were approved by the 146 authorities in April was 10,748, as compared with 10,208 in March, 1938, and 14,480 in April, 1937.

A.V.T.C. Magazine.

We have received a copy of "Links," the magazine of the Aldershot Army Vocational Training Centre, and regret to record that it is the last number to be issued from Aldershot, as the centre is under orders to close by June 30. The work will be continued at Chisledon and Hounslow, although some of the men will remain at Aldershot in the motor mechanics' school. The magazine includes, among a great deal of interesting matter, extracts from a number of letters received from ex-students who have found regular employment in their respective trades learned at the Centre, and the letters show that the A.V.T.C. has fully achieved its object of equipping soldiers with a practical knowledge of a trade that would provide them with employment at the end of their military service.

IN PARLIAMENT

The Registration Bill.

During the Committee stage of the Architects' Registration Bill in the House of Lords, Lord Bertie of Thame moved an amendment to Clause 1 to provide that "a person shall not practise or carry on any business under any name, style or title containing the word 'architect' " unless he is a "person who makes application to the Council in the prescribed manner and, on payment of the prescribed fee, is entitled to be registered under this Act and the principal Act, if the Council are satisfied on a report of the Admission Committee : (*a*) That he is an architect member of the Royal Academy or of the Royal Scottish Academy; or (*b*) that he is a person who has gained a diploma in architecture from any university in Great Britain or Northern Ireland, or from a school of architecture recognised as such by the Council; or (*c*) that he has passed the national qualifying examination for registration approved by the Council and held by the Board."

Lord Bertie said that under the terms of the Act of 1931, known as the "principal Act," an architect could please himself whether he registered or not. Failure to do so did not prevent him calling himself an architect. The provisions of the present Bill seemed clear as regarded the person now practising as an architect, because there was a period during which such a person might register. When that period expired one might assume that applicants for registration would have to pass a qualifying examination, but that was not so, because the Bill made no provision for such applicants, relying apparently on the principal Act. But that Act was so ambiguous and inequitable that a resolution was passed unanimously by the Registration Council to that effect. It was in order to try to remove some of this ambiguity that he brought forward this amendment. Persons who qualified for diplomas must be few in number, and must all be children of well-to-do poeple, because university education was not cheap, nor were the fees of architectural schools, which, he believed, were 300 guineas upwards. Therefore, poorer people must find some cheaper means of entry into the profession and ought to have a qualifying examination.

Under Clause 5 of the principal Act the Board of Architectural Education, established by the Registration Council, was charged with the duty of holding examinations. This body had not once carried out its statutory duty to hold examinations during the six years or more of its existence. The effect of his amendment would be to compel the Board to carry out what Parliament had ordered it to do in 1931, and which it had hitherto neglected to do. If these provisions were not in the Bill, what would happen? The examinations of universities and recognised schools were already accepted, but there was only one examination recognised by the Council, and that was the R.I.B.A. examination. This recognition had led to a lot of criticism in the profession. It was felt that the R.I.B.A. had got a virtual monopoly. If there was a national qualifying examination, as there was in the legal and therapeutic professions, there would be no cause for complaint, and harmony would be restored.

Lord Crawford said that Lord Bertie was under a great misapprehension. The R.I.B.A. had not a virtual monopoly. The R.I.B.A. was the oldest examining body in the country. It was older than any school, and older than any university, and yet, under this amendment, it would be prevented in future from conducting examinations. He really thought that there ought to be some good and strong case alleged before the R.I.B.A. should be forbidden to hold examinations. It had done so for over fifty or sixty years, and no reason had been advanced why it should not do so in the future. Then Lord Bertie had said that as things were children of well-to-do parents alone could get entrance to a school of architecture, and that it cost up to £300 a year.

Lord Bertie : I said that the architectural school fees were 300 guineas and upwards. That was the best information I had.

Lord Crawford : I may tell my noble friend that there are schools in this country where complete qualifying examinations may be passed, after a course of from three to five years, at a cost of under £1 per annum. There are the Universities of Cambridge, Oxford, London, Sheffield, Durham, Manchester and Liverpool, and the following schools : Leeds, Glasgow, Edinburgh, Aberdeen, Cardiff, the Regent-street Polytcehnic, Birmingham, Belfast, and the Architectural Association of London. I assert that in some of these schools the fees are merely nominal. Those schools are among the 19 which are authorised by the Board of Architectural Education to hold examinations, and the boys and girls from those schools get their diplomas accordingly.

The third point in this amendment (continued Lord Crawford) was that the Board of Architectural Education should in future hold what was called a national examination. His noble friend had again been misinformed about the parent Act. That statute set up two committees, one called the Council and the other called the Board. The Council dealt with registration and the organisation and departmental work of registration, and the Board dealt with the educational side of it. It was an immense body of 75 members, and it had under the parent Act power to conduct examinations. His noble friend said that it was its duty. That was not so. If he had read to the end of the clause he would have found the optional words which followed.

Lord Bertie : It says that it shall be the duty of the Board to recommend to the Council certain things, and to hold examinations in accordance with the Act.

Lord Crawford : If the noble lord will read on he will find that they are not obliged to do that if they prefer that this examination should be conducted by other bodies, and that is the decision that this Architectural Board has reached—that on the whole it is best for architectural education that there should be a variety of examinations instead of a single national examination.

I conclude by giving the reason for that decision. It will be quite easy for this Architectural Board to say : "We will have a national examination," but the immediate effect of that would be to standardise the examination in architecture. How could the London Polytechnic, for instance, or the Technical School at Leeds, compete against a national examination held in London? It could not do so. After ten years you would suppress the smaller local schools. That would be fundamentally a mistake.

Lord Horne opposed the amendment because, he said, it would upset the balance of the Bill as arrived at between the Architects' Registration Committee and the joint Committee set up by the engineering profession to consider the terms of the Bill.

Lord Bertie withdrew his amendment, but said he could not undertake that he would not bring it up again on report.

Slum Clearances.

Mr. Craven-Ellis asked the Minister of Health how many of the 176,466 houses involved in slum clearance orders had been acquired and demolished by local authorities; what had been the cost of acquiring these properties; how many owners were concerned, and what was the total sum paid to them; and what was the net building area of the land acquired.

Mr. Elliot said that of the houses referred to, 57,528 were to be demolished, after acquisition, by the local authorities and the remainder by the owners. By the end of 1937 about 104,000 of them had been demolished. The other particulars asked for were not available.

Local Authority Housing Schemes.

In reply to Colonel Nathan, Mr. Elliot said that in the course of this year approval of tenders was refused in three cases, affecting 152 houses. In two cases, affecting 79 houses, the local authority were recommended to defer the schemes.

SOCIETIES & INSTITUTIONS

THE ARCHITECTURAL ASSOCIATION.

Leverhulme Scholarship in Architecture.

The Leverhulme Scholarship, tenable at the Architectural Association School of Architecture, value £1,000, which includes payment of fees and maintenance for a period of five years, has been awarded this year to Mr. John T. Norie Miles, of Southsea, Hants.

NORTHERN A.A.

The Cumberland Branch.

At the annual meeting of the Cumberland Branch, Northern Architectural Association, Mr. R. Morton Rigg, L.R.I.B.A., Penrith, was elected Chairman, with Mr. S. W. B. Jack as Senior Vice-Chairman. A donation was made to the Sir Guy Dawber Memorial Fund in memory of his work in rural housing.

A sub-committee was appointed to consider the application of the British standard specifications in this area, particularly with regard to bricks. The immediate Past-Chairman (Mr. J. S. Stout) offered a prize of five guineas for a students' competition.

INSTITUTION OF CIVIL ENGINEERS.

Air-Raid Precautions.

The Institution of Civil Engineers, with the approval and collaboration of the Air-Raid Precautions Department, have appointed a committee for the compilation and publication of authoritative technical information on the subject of precautions against air attack for the use of engineers in their work of design, construction and maintenance of structures and other engineering work, including public utility services. This committee, which, under the chairmanship of the President of the Institution, consists of engineers conversant with both the practical and scientific aspects of the subject, has been promised by the Air-Raid Precautions Department all possible assistance in the form of available scientific data concerning the problem.

It is hoped that this will be the means of conveying to engineers throughout the country valuable help in dealing with the problems which confront them now and in the future as the result of the development of aerial warfare.

INSTITUTION OF STRUCTURAL ENGINEERS.

Membership.

The following have been elected to membership of the Institution of Structural Engineers :—

As Students.—T. F. Chase (Salop), D. A. Cox (Gosport), B. D. Jukes (Wellington, N.Z.).

As Graduates.—T. W. Ashdown (Hull), G. G. Kelley (Brighton), D. G. Mealing (London), N. Rayman, B.Sc. (Birmingham), R. T. Stokes, B.Sc. (Birmingham).

As Associate Members.—J. G. Dowdeswell (London), H. Hyland, L.R.I.B.A. (Wellington, N.Z.), D. G. Milloy (Nottingham), A. E. Peatfield (Retford, Notts), R. C. Rippon, B.Sc., A.M.Inst.C.E., A.M.I.Mech.E. (Sunderland), J. S. Terrington, B.Sc., A.C.G.I., A.M.Inst.C.E. (London), W. E. Thorowgood, M.A., A.M.Inst.C.E. (Guildford).

As Associate.—L. F. Phillips (Pershore, Worcs.).

As Members.—J. Addie (Cairo), M. H. R. Cogan (Mexico), D. M. Eley (Chatham), W. G. Shipwright (London).

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE.

Professional Examinations, March, 1938.

Of the 267 candidates examined in Final Examination of the Auctioneers' and Estate Agents' Institute of the United Kingdom, held in March, 137 were successful. Mr. A. F. King, 19, Cowick-lane, Exeter, was placed first.

Mr. T. R. Percy, 11, Glenbrooke-terrace, Low Fell, Gateshead, was first in the Direct Final, in which examination four of the five candidates passed, and in the Intermediate Examination 155 of the 321 candidates passed, Mr. J. L. Docksey, 175, Highgate, Heaton, Bradford, Yorkshire, being placed first.

The percentages of passes in the three examinations, Final. Direct Final and Intermediate, were 51.3, 80 and 48.3 respectively.

LAW REPORTS

OFFICIAL REFEREE'S COURT.
Before MR. S. R. C. BOSANQUET, K.C.

CLAIM BY REINFORCED CONCRETE ENGINEERS ON ARCHITECTS' FINAL CERTIFICATE.

Christiani and Nielsen, Ltd. v. Nelson.

In this case the plaintiffs, Messrs. Christiani and Nielsen, Ltd., reinforced concrete engineers, of Romney House, Marsham-street, Westminster, S.W., claimed to recover from the defendant, Mr. John Ernest Nelson, of Winchester House, Sharnall-street, Walthamstow, Essex, £1,569, which the plaintiffs alleged was due to them under a contract by which they had agreed to construct an open-air swimming pool for the defendant for a sum of upwards of £7,500. The £1,569 was the balance plaintiffs alleged to be due to them under the contract.

The defendant, who was said to have paid sums totalling over £6,000 under the contract, disputed liability for the balance now sued for. He alleged that the work was not done in accordance with the contract conditions, but was done badly and inefficiently, and he counterclaimed for about £2,500 to make good the alleged defects.

The plaintiffs denied the defendant's allegations as to bad work.

Mr. Gilbert Paull appeared for the plaintiffs; the defendant appearing in person.

Mr. Paull said that the £1,569 which the plaintiffs were claiming was the amount of the architects' final certificate.

Asked by the Official Referee why he did not pay the balance, Mr. Nelson said there were serious defects in the swimming pool. He stated that he had been hoping to sell the pool to the Dunstable Council, but the matter had fallen through.

The Official Referee observed that Mr. Nelson ought to pay, and then he might be able to claim under the guarantee which plaintiffs had given to maintain the pool for five years; but the guarantee was not in force until Mr. Nelson did pay.

In the result the Official Referee said he did not think there was any answer to the plaintiffs' claim, and there must be judgment for them. He accordingly entered judgment for them for the amount claimed with costs, and dismissed Mr. Nelson's counterclaim.

KING'S BENCH DIVISIONAL COURT.
Before JUSTICES MACNAGHTEN and LEWIS.

SEQUEL TO COLLAPSE OF A WALL: BUILDING OWNERS' CLAIM AGAINST ARCHITECT.

Keete v. King and Keary, King and Keary v. Lucas.

These consolidated actions arose out of the collapse of a section of the old city wall at a building site in Coombe-street, Exeter, in January, 1934.

Messrs. King and Keary, warehousemen, of Exeter, who owned the site on which the wall fell, had at the material time instructed Mr. J. A. Lucas, an architect, of Exeter, to design and prepare plans for a warehouse to be erected on the site, the plaintiff, Mr. T. B. Keete, of Sweetbriar-lane, Exeter, being the builder appointed under the contract.

In the dispute which had occurred, the Special Referee, to whom it was referred, allowed Mr. Keete, as against Messrs. King and Keary, £232 19s. 1d. for work done, but refused the builder's claim for £125, his agreed loss of profit on the contract, which was determined by Messrs. King and Keary.

In the second action, which was consolidated with the first, Messrs. King and Keary claimed from Mr. Lucas, the architect, the return of the fees they had paid him, viz., £80, and any sums which they were held liable to pay the builder, but the Referee disallowed that claim, and from that decision Messrs. King and Keary now appealed, and Mr. Keete also appealed from the refusal of the Referee to allow him the sum claimed for his loss of profit on the contract.

At the conclusion of the arguments of counsel, Mr. Justice Macnaghten, in giving judgment, said the wall fell through the excavation of a bank at the base. No mention was made in the bill of quantities about any possible underpinning. It was clear that the omission was a grave one on the part of Mr. Lucas, and it appeared to the Court that he had failed in his duty to Messrs. King and Keary.

The fall of the wall showed clearly that the work provided for in the contract was insufficient, and to have put up the building planned a costly system of underpinning would have been necessary. The appeal of Mr. Keete would be allowed, and he would be given judgment for £232 19s. 1d., together with £125 loss of profit, with costs both of the action and of the reference as against Messrs. King and Keary. In the circumstances, the Court held that Messrs. King and Keary were entitled to recover both those sums from Mr. Lucas, and also to be repaid the £80 he had received for fees, in all £437 19s. 1d., for which amount they would be given judgment as against Mr. Lucas.

Mr. Justice Lewis concurred.

OFFICIAL REFEREES' COURT.
Before MR. T. EASTHAM, K.C.

CONTRACTOR'S CLAIM AGAINST BUILDERS.

Dunlop v. Messrs. Harris (Builders), Ltd.

In this case Mr. Alexander Dunlop, of Roxley-road, Lewisham, Kent, claimed from the defendants, Messrs. M. Harris (Builders), Ltd., of Golders Green, N.W., the balance of the price of work done and labour supplied and, alternatively, for damages for alleged breach of contract.

Mr. Dunlop carried on business as a contractor and road contractor, and in September, 1937, he entered into a contract with the defendants to construct on the Chinbrook-road housing estate, at Grove Park, a roadway at the price of £2 11s. per foot. Mr. Dunlop had received £1,050 on account, and now claimed the balance on a *quantum meruit* basis. Mr. Dunlop said that the defendants wanted to include into the contract a soil sewer 270 ft. long, and his case was that the soil sewer was not included in the contract, and that the defendants had wrongfully repudiated the contract by refusing to treat the soil sewer as an extra.

Defendants alleged that Mr. Dunlop had agreed to do the work for £2 11s. a foot, including the soil sewer, and that if the contract did not contain it, it was due to a mutual mistake. Defendants also alleged that it was Mr. Dunlop who had wrongfully repudiated the contract.

After a hearing lasting several days, the Official Referee, in giving judgment, said it was clear that throughout the trouble Mr. Dunlop insisted that the £2 11s. was for the roadway, and that any other work outside that had to be paid for as an extra. On the other hand, the defendants refused to treat the soil sewer as an extra. He (the Official Referee) was quite clear that the soil sewer was to be paid for separately. He found that Mr. Dunlop was entitled to succeed, and to a sum on *quantum meruit*. If the parties could not agree a sum he would hear the matter out, but he thought it was a case in which the parties should agree the sum to which the plaintiff was entitled.

Counsel then saw the Official Referee in his private room, and ultimately he gave judgment for Mr. Dunlop for £480 with costs, and for him also on the defendants' counter claim with costs.

The £100 paid into court by the defendants, the Official Referee directed, should be paid out to Mr. Dunlop.

FEDERATION OF BRITISH INDUSTRIES.

Representations to L.C.C.

The Federation of British Industries, 21, Tothill-street, S.W.1, has been informed by the London County Council that it has agreed to modify the Clause in the L.C.C. Contract Conditions for Engineering works, concerning which the F.B.I. had made representations to the Council. In the Clause in question the Council reserved to itself the right to postpone execution of the work for any cause, without granting the contractor recompense for the extra expense to which such postponement might put him. It was believed that actual cases had arisen where such postponements had led to substantial increased cost to the contractor. The Federation contended that the contractors could not possibly foresee or provide for such eventualities over which he had no control.

INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

We do not undertake to reply to inquiries concerning proprietary materials.—ED.

QUESTIONS.

Air Space.

SIR,—A certain authority has by-laws which require an air space of 4 ft. only for shops, but 15 ft. upwards for dwelling houses. Would this by-law be respected in the case of a dwelling-house over a shop by providing 4 ft. at rear of shop and 15 ft. at first-floor level for the dwelling-house, or does the latter make the whole building a dwelling-house?

PLANS.

Bats in Church.

SIR,—I should be grateful if any reader could advise me as to the best method of getting rid of bats in a church. Their nesting-place is in the roofs.

M. M.

ANSWERS.

Cubic Measurement.

[ANSWER TO "ESTIMATES," JUNE 17.]

SIR,—The method which best achieves the proper average result as compared with the normal building is to measure the area of the flat roof as a flat-roofed building in accordance with standard method, and then the various containing rectangles surrounding it as lean-to buildings, measured to half the roof height. I have found this method to represent the facts of the case very reliably.

CUBE.

Plumbing for Urinals.

[ANSWERS TO "SANITATION," JUNE 17.]

SIR,—A urinal is a form of water closet, the gulley of which takes the place of a trapped pan, which need not be outside the building, but placed as convenient to the channel of the fitting.

WASTES.

SIR,—It is usual for a trapped gulley to be placed in the open air and in a convenient position for cleaning. The advantage of its being in the open air is that during cleaning or repairs any fumes are more readily carried away. Gullies should be placed outside whenever possible, but if they must be placed inside a building they should be conveniently accessible and situated in a well-ventilated position.

W. E. W.

Cedar Shingles.

[ANSWERS TO "ROOFING," JUNE 17.]

SIR,—The hips are formed by alternately butting the tiles at the hip, and a good job can be made by putting several thicknesses alternately butted down the hips and neatly sawn off on either side. If only one thickness is used, it is advisable to use lead under the hip.

TILES.

SIR,—Hips and ridges are best formed by shingles only; for this purpose they should be of even width of not more than 4 in. Lead underneath is not necessary or to be recommended on account of corrosion troubles. If necessary, the shingles can be boarded underneath, but this is not often required.

W. E. W.

SIR,—When fixing cedar shingles on roofs no special water-tight joint is needed, nor is it necessary to put lead beneath ridges and hips. The ridge tiles are "side-lapped" alternately, and chamfered off, and it may be safely said that it is physically impossible for any rain to penetrate through a hip or ridge when properly fixed with cedar wood tiles. Hips and ridges must not be mitred.

A. J. T. E.

NOTES ON ESTIMATING FOR BUILDERS' WORK—XXIV.

By J. H. BARNS, F.I.O.B.

PIPE WORK.

The following is from the Standard List of Prices for wrought welded tubes and fittings :—

Nominal internal diameter, in inches	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Tubes 2 ft. long and over ... ... per ft.	0 4	0 4½	0 5½	0 6¾	0 9½	1 1	1 4½	1 10
Pieces 12 to 23½ in. long ... ...each	0 10	0 11	1 1	1 5	1 11	2 8	3 4	4 9
Do., 4 to 11½ in. long ... ... ,,	0 7	0 8	0 9	0 11	1 3	1 8	2 2	3 0
Long screws, 12 to 23½ in. long ... ,,	0 11	1 0	1 3	1 7	2 2	2 10	3 9	5 3
Do., 3 to 11½ in. long ... ... ,,	0 8	0 9	0 10	1 1	1 5	1 11	2 6	3 6
Bends ... ... ,,	0 8	0 9	0 11	1 2	1 7½	2 7½	3 2	5 2
Springs, not socketed ... ... ,,	0 5	0 6	0 7	0 9	1 1½	1 11½	2 3½	3 11
Elbows, square ... ... ,,	0 10	0 11	1 1	1 3	1 6	2 2	2 7	4 3
Tees ... ... ,,	1 0	1 1	1 3	1 7	1 10	2 6	3 1	5 1
Backnuts ... ... ,,	0 2	0 2	0 3	0 3½	0 5	0 6	0 8	1 1

Random lengths of wrought-iron tubes over 6 ft., screwed and socketed, are charged at list prices less current discounts. In the event of tubes being supplied otherwise than as described above, the extras and allowances would be as follows :—

ALLOWANCES.

1. Random lengths over 6 ft. screwed, without sockets, less 2½ per cent. on the net price.
2. Random lengths over 6 ft. not screwed and without sockets, less 3¾ per cent. on the net price.

EXTRAS.

3. Random lengths under 6 ft.

	2 ft. to 4 ft. inclusive. Per cent. less gross discount.	over 4 ft. to 6 ft. inclusive. Per cent. less gross discount.
Screwed and socketed	15	7½
Screwed without sockets	7½	3¾
Not screwed	3¾	1¾

4. Exact lengths.

Six ft. and under are charged at an extra of 2½ per cent. less gross discount in addition to the extra No. 3. Tubes over 6 ft. if supplied in exact lengths are charged at an extra of 2½ per cent. less gross discount.

DISCOUNTS.

	Per cent.		Per cent.
Black gas tube ...	57½	Fittings...	51¼
Blue water tube ...	55	,, ...	46¼
Red steam tube ...	51¼	,, ...	41¼
Galvanised gas tube ...	47½	,, ...	40
,, water tube	42½	,, ...	36¼
,, steam tube	36¼	,, ...	30

It will be seen from this list that wrought-iron tubes 2 ft. long and over are charged at the standard list price less the discounts (which vary from time to time).

Pieces less than 2 ft. are sold at " each."

Long screws are pieces of wrought-iron tube with a longer thread than usual, and are used to form a connector. The connector, therefore, consists of a long screw and a back nut ; the back nut is necessary, because without it the joint is apt to leak owing to the thread of the long-screwed tube being cut slightly deeper.

Bends are supplied to several angles. When supplied to a right angle they are termed " bends " ; when to some more obtuse angle they are termed " springs." The seemingly disproportionate difference in price is due to the springs not being quoted with sockets.

Nowadays a large amount of pipe work is done by entirely eliminating the screwed ends and sockets to the barrel and doing the whole work with plain barrel, and making bends and connections of the pipe by acetylene welding methods ; in the case of pipes 2-in. diameter and upwards this method is considered to be much cheaper. One of the advantages claimed for this method is that in the event of a vertical pipe leaking it is only necessary to use an acetylene blow pipe to remedy the defect.

In estimating for tube work it is necessary to measure the actual running length of the pipes, and the number of the fittings (such as tees, elbows, bends, etc.) required.

Internal diameter	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
BENDS :—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Gross list price ... ... each	0 8	0 9	0 11	1 2	1 7½	2 7½	3 2	5 2
Less discount, 57½ per cent. ... say	0 4½	0 5	0 6	0 8	0 11½	1 6	1 10	3 0
Net price	0 3½	0 4	0 5	0 6	0 8	1 1½	1 4	2 2
Labour fixing would cost about 25 per cent. of the gross cost of the fitting ... ... say	0 2	0 2½	0 3	0 3½	0 5	0 8	0 9½	1 3½
	0 5½	0 6½	0 8	0 9½	1 1	1 9½	1 13½	3 5½
ELBOWS (square).								
Gross list price ... ... each	0 10	0 11	1 1	1 3	1 6	2 2	2 7	4 3
Less discount, 51¼ per cent. ... say	0 5	0 5½	0 6½	0 7½	0 9	1 1	1 4	2 2
Net price	0 5	0 5½	0 6½	0 7½	0 9	1 1	1 3	2 1
Labour fixing would cost about 25 per cent. of the gross cost of the fitting ... ... say	0 2½	0 2½	0 3½	0 4	0 4½	0 6½	0 8	1 1
	0 7½	0 8	0 10	0 11½	1 1½	1 7½	1 11	3 2
TEES.								
Gross list price ... ... each	1 0	1 1	1 3	1 7	1 10	2 6	3 1	5 1
Less discount, 51¼ per cent. ... say	0 6	0 6½	0 7½	0 9½	0 11	1 3½	1 7	2 7
Net price	0 6	0 6½	0 7½	0 9½	0 11	1 2½	1 6	2 6
Labour fixing would cost about 50 per cent. of the gross cost of the fitting ... ... say	0 6	0 6½	0 7½	0 9½	0 11	1 3	1 6½	2 6½
	1 0	1 1	1 3	1 7	1 10	2 5½	3 0½	5 0½

The cost of labour, etc., for running tube work is approximately as follows :—

Per ft. run, ¼ in., 2d. ; ⅜ in., 2d. ; ½ in., 2½d. ; ¾ in., 3½d. ; 1 in., 4½d. ; 1¼ in., 6½d. ; 1½ in., 8½d. ; 2 in., 11d.—or about 50 per cent. of the gross cost of tubes.

The cost of fixing the fittings, elbows, etc., would be additional.

As a rule it is rather cheaper to form a " fire " bend than to use the ready-made article as with ready-made bends it is necessary to make two joints, which give more opportunities for leakage.

In the bending of iron pipes, care must be taken not to buckle the pipe, and to ensure this for the larger size pipes two or more heats in forge will be necessary. The smaller pipes may probably be bent in one heating operation.

There are various methods of making approximate estimates for pipe work. These are sometimes of use where the runs of pipe are not actually known, and it would, therefore, be impossible to take exact particulars.

A fairly reliable method is to take the approximate number of running ft. of pipe and add on about 45 per cent. to the net cost of the pipe to cover fittings. A special amount must be added for labour to suit the presumed conditions.

Another method of arriving at an approximate price is to find the approximate number of running ft. of barrel, add on the probable cost of labour for running the pipe, and add 20 per cent. to the cost of both labour and materials to cover fittings.

Experienced estimators prefer to get the exact particulars required and quote accordingly.

In cheaper work, malleable fittings are often used.

HEATING ENGINEER.

The installation of a hot-water heating system is usually done by a firm specialising in such work, as drawings must be prepared showing the proposed runs of pipes for flow and return, and the position of the radiators, fitting of main valves on supply, and fixing of suitable boilers, the capacity of which will depend upon the heating surface required to heat the building.

The calculations to give the heating surface necessary would take into account the various factors in the building affecting such questions, together with the size and disposition of the radiators required. A builders' estimator would not usually be expected to prepare such a scheme, but he may be instructed to fix a few radiators as an addition to an existing installation.

The size of the radiators would depend upon the cubic capacity of the space to be heated and allowances should be made to deal with heat losses, doors, windows, etc. No brief indication on these points is possible—except to say that, under reasonable circumstances, 14 ft. to 18 ft. super of heating surface of pipes and radiators will be sufficient to heat 1,000 cubic feet of air space.

The following is an example of the cost of a radiator :—

	£	s.	d.
1—12-section four-column 24 in. high radiator ... say	1	18	0
2—½ in. valves, at say 3s. 6d. each	0	7	0
2—short lengths ½-in. steam tubing, at say 0s. 6d. each	0	1	0
2/1 in. by 1 in. by ½ in. square tees, at say 1s. 0d. each	0	2	0
2—cantilever brackets, at say 0s. 8d. each	0	1	4
Bricklayer and labourer, say 1 hour	0	3	1
Fitter and mate, say 8 hours ...	1	4	10
	£3	17	3

Add profit, etc., as before.

The breaking into existing system, including suitable valves and connections, would be additional.

(To be continued.)

BUILDING RESEARCH STATION

THE DESIGN OF TIMBER FLOORS TO PREVENT DRY ROT.*

In the previous part of this note † attention was drawn to the liability of timber to attack by dry rot when fixed in damp situations. Care in the selection of timber, treatment of the timber by preservative and suitably designed construction, were the precautions recommended in order to prevent such attack. The question of the selection of timber and treatment by preservatives were dealt with in Part I, as was also the design of "solid floors." It remains to consider the other types of floors mentioned in the classification given in Part I, namely *Partially Suspended Floors* and *Totally Suspended Floors.*

Partially Suspended Floors.

In partially suspended floors, in which the boards are suspended between supporting battens laid direct on to a sub-floor, the main feature from the point of view of attack by dry rot is the space corresponding to the depth of the battens.

This space is generally provided to meet requirements not met by a solid floor, *e.g.*, resilience, accommodation for service pipes, or, in upper floors, improved sound insulation. Where these requirements do not exist, it is advisable to dispense with the space, *i.e.*, form a solid floor. The space is usually too small to ventilate adequately, and it is therefore necessary to guard against the risk of dry rot to which timber in contact with unventilated air is exposed. The risk is probably greater with this form of construction than with either a solid floor or a totally suspended floor. The increasing use of these partially suspended floors, as, for instance, in the form of "floating floors" designed to reduce sound transmission, calls therefore for a full appreciation of the risks involved and the precautions which should be taken to obviate these risks.

(*a*) *Upper Floors.*—As in the case of upper solid floors, the concrete sub-floor under upper partially suspended floors should be thoroughly dried out before any timber is laid.

When the concrete is properly dry a timber finish can be fixed safely by laying, say, 1 in. nominal T. and G. floor boards on, say, 2 in. by 2 in. deal battens fixed to the concrete by floor clips, of which several proprietary types are marketed. Care should be taken to ensure that all dirt, especially sawdust and shavings, etc., is removed from between the battens before the floor boards are fixed. If the concrete is dry, it is not considered imperative to treat the battens and boards with a preservative; but it is by no means easy to dry out the concrete, and preservative treatment of the timber is desirable wherever there is the slightest suspicion of dampness. The use of concrete or a sand and cement mix in lieu of floor clips, to hold down *dove-tailed* battens adds to the weight to be carried on the floor, reduces the space available and, of course, is only safe when the battens have received preservative treatment.

(*b*) *Ground Floors.*—With partially suspended as with solid floors next to the ground, it is necessary that, in addition to preservative treatment of all timber, a completely impervious layer should be interposed between the timber and the sub-floor.

Before this damp-proof course is laid provision for securing the timber battens to the concrete sub-floor can be made either by embedding pressure-impregnated timber fillets or blocks or nail-holding concrete blocks in the sub-floor, or, preferably, by floor clips inserted in the concrete before the concrete sets. The whole area of the floor should then be covered with a layer of a material suitable to provide the requisite impervious barrier.

As indicated previously in the case of solid floors, bitumen is one of the most convenient materials for this purpose—a lightly brushed coating of tar will not do. The bitumen should be the same as specified for solid floors; its hardness, as defined by its "penetration-number," should be between 40 and 50. It should be poured hot to form a continuous layer at least $\frac{1}{8}$ in. thick. After the bitumen has been laid, pressure-impregnated battens can be fixed on top of it either by nailing through to the fillets or nail-holding concrete provided below, or by fixing into clips provided for this purpose. Clips should be opened before the bitumen is laid. It is possible that the battens, when under load, especially in the centre of floors, will sink through the layer of bitumen, giving a "dip" to the floor surface. It is recommended, therefore, that small packing pieces, $\frac{1}{8}$ in. deep, of a suitable material, *e.g.*, iron, hard-board, etc., should be pressed into the bitumen at, say, 2 ft. centres under all battens. Any battens which are cut or notched after preservative treatment should have the exposed surface treated by brush application of a suitable preservative. Finally, the boards can be fixed in position by nailing to the battens. The underside of the boards, if they have not been impregnated, should also be treated by brush application of a suitable preservative.

It must be emphasised that in both upper and ground floors of this type ventilation alone cannot be relied upon to prevent dry rot, and for this reason the precautions indicated should always be observed. It is, however, an added advantage if air circulation can be induced in the cavity formed between the boards and the sub-floor. This particularly applies to upper floors where preservative treatment of the timber is not adopted. One or two small air-bricks opening into the cavity are useless for this purpose. Gaps between the battens sufficient to allow a thorough circulation of air, the finishing of the boards, say, 2 in. from the wall face, and the covering of the continuous aperture so formed around the edge of the boards by a dado behind which air-circulation can be induced by suitable openings to either the outside or inside air or both, are examples of the type of construction required.

The above recommendations for the construction of partially suspended ground floors are offered tentatively, pending the result of full-scale experiments which the Forest Products Research Laboratory hope to make.

Totally Suspended Floors.

From the present standpoint the main feature of totally suspended floors, *i.e.*, those in which boards are suspended between joists which are themselves suspended, is the relatively large air space in proximity to the timber.

(*a*) Upper Floors.—Dry rot in upper totally suspended floors is rare because of the dry air conditions which usually exist above and below upper floors, and also because of the absence of any "wet" construction in floors of this type. No special precautions are required, except for the fact that any risk of dry rot in this type of floor usually lies in a damp condition in the walls, etc., supporting the floor. It is, therefore, important that all ends of timbers, or wall plates, etc., which are built into damp materials or materials which may become damp, should be treated by brush application of a suitable preservative and/or bedded on a layer of bituminous felt. In the case of joists, the end of the joist can be wrapped in the felt before being built into the wall.

(*b*) Ground Floors.—If for any reason it is decided to construct a totally suspended timber floor next to the ground, *e.g.*, where the site level in relation to the finished floor level makes such construction economic, it is imperative that the space under the floor should be thoroughly ventilated, even in cases where the ground moisture is sealed by an impervious barrier. If thorough ventilation can be obtained, no preservative treatment of the timber is necessary for the joists and floor boards, but it is a useful precaution to treat the wall plates with a brush application of a suitable preservative.

To obtain efficient ventilation, a space of sufficient depth between the underside of the floor and the top of the ground or site concrete is necessary to facilitate the circulation of air. A clear depth of 1 ft. should be considered the minimum in this respect. An aperture opening into this space cannot be considered adequate as a means of ventilation; a continuous air current must be induced under the whole of the floor. Sufficient air bricks should be provided, as high as possible above ground level, so as to allow at least $1\frac{1}{2}$ sq. in. *open area* per foot run of wall. These air bricks should be placed on opposite walls in order to allow *cross* ventilation. All sleeper walls should be honeycombed. Care should be taken that no unventilated air pockets exist, *e.g.*, as may occur near to a bay window. The construction of ducts in the form of pipes under hearths, and under solid floors wherever they interrupt cross ventilation, is of great assistance in this respect.

Because the space under the floor breaks the capillary path between the timber and the ground or site concrete, and thereby prevents the rise of moisture in liquid form, and because the ventilation, which, as stated, must always be introduced, removes any moisture which may rise from the ground in the form of vapour, it is possible, where this insulation and ventilation are efficient, to omit safely the overall damp-proof course which is necessary under timber in solid floors and partially suspended floors next to the

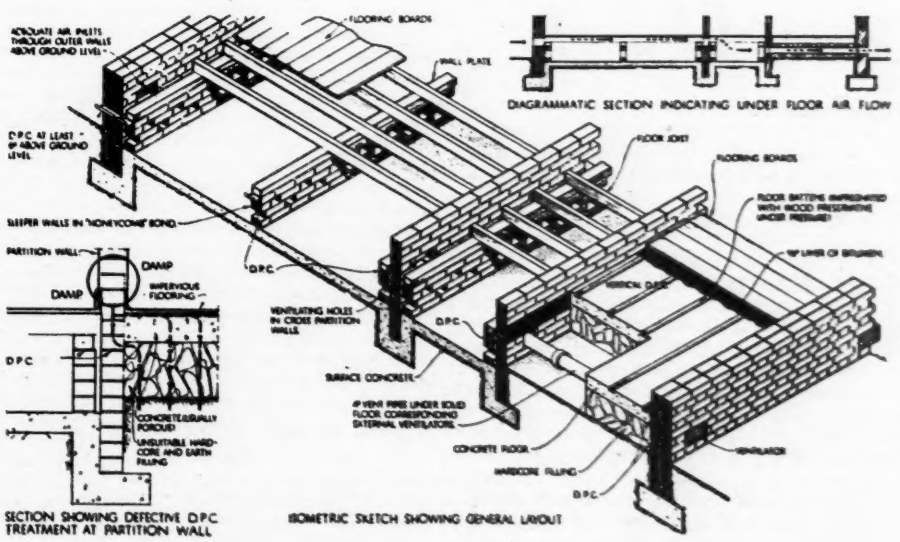


FIG. DETAILING AT GROUND FLOOR LEVEL RECOMMENDED TO ENSURE ADEQUATE UNDER FLOOR VENTILATION AND PREVENTION OF RISING DAMPNESS

FIG. 1. (See next page.

* Crown Copyright Reserved.
† "The Builder," May 20.

ground. In this type of construction, the impervious barrier is confined, therefore, to the materials in actual capillary contact with the ground, *e.g.*, walls and supports to the floor.

It should be noted that tongued and grooved boards should always be used for a floor the underside of which is ventilated as described above. If the ventilation is as efficient as it should be, objectionable draughts will otherwise pass through the open joints between the boards.

Fig. 1 shows a totally suspended floor, and a solid floor, both next to the ground, designed in accordance with the recommendations made above. The detail in the left-hand bottom corner illustrates faulty construction, since the damp-proof course in the solid floor has not been carried down the face of the wall to make the requisite water-tight joint with the damp-proof course in the wall. This omission is found to be the cause of many cases of dampness reported to the Building Research Station.

Floor Coverings.

The floor covering used naturally has an influence on the ventilation of timber floors. Impervious coverings, such as linoleum or rubber, reduce ventilation and increase risk of condensation, and where the construction is faulty the use of an impervious covering may be sufficient to create a dangerous condition. No trouble should be experienced whatever type of floor covering is used on floors properly constructed as previously described. It must be emphasised, however, that impervious coverings should never be laid immediately after the erection of a building. They should be laid only when the building has had time to dry out completely.

Linoleum, etc., on floors of the solid or partially suspended types, particularly when they are next to the ground, should not be washed, especially if the covering is badly worn, since any water which penetrates through joints and cracks in the covering may have difficulty in escaping. Linoleum in such situations should be oiled or waxed.

Periodic Inspection.

In conclusion, it should be emphasised that even when all precautions have been taken, accidents may occur, and, therefore, wherever timber is present, dry rot should be regarded as a possibility and periodic inspection made in order to discover and remedy any outbreak while it is still in its early stages.

(This note has been prepared in co-operation with the Forest Products Research Laboratory, who have provided much of the information on which it is based. Full use has been made of Bulletin No. 1 of the Laboratory on "Dry Rot in Wood" (London: H.M. Stationery Office, price 1s. net). A third edition of the Bulletin, at present in course of preparation, is to be issued in the near future. The question of the *cure* of dry rot, which is not covered by the present note, is fully dealt with in the Bulletin.)

Holidays with Pay.

A concise survey of the position in over a score of the leading industries of this country regarding the subject of holidays with pay has been compiled and published by Mr. James Whittaker. The booklet is entitled "Holidays with Pay," and contains forewords by Lord Horder, G.C.V.O., M.D., F.R.C.P., and Captain Osbert Peake, M.P. The author points out that 50 years ago the mere suggestion of holidays with pay would have been treated with derision, but employers are now realising that it is in their best interests to conserve, aid and develop to the utmost the lives of their employees.

The booklet, which may be obtained free on request to Mr. Whittaker, 180, Fleet-street, E.C.4, contains a number of letter extracts from employers in various trades and industries throughout the country which testifies to the advantages gained from granting holidays with pay. Also included is a list of industries in which certain individual firms have granted holidays with pay during 1937.

PROGRESS IN BUILDING RESEARCH

REPORT OF THE BUILDING RESEARCH BOARD.

The Department of Scientific and Industrial Research has issued the Report of its Building Research Board for the year 1937 (H.M. Stationery Office, 3s. 6d. net). The Report lays special stress on the importance of recent developments in the subect of soil mechanics. In the past, the civil engineering problems of foundations, of the stability of embankments and cuttings, and of the settlement of buildings and other structures, have had to be dealt with on a very empirical basis, notwithstanding that they must loom very large in any costing of civil and structural engineering or general contracting works. This was inevitable because the necessary scientific knowledge did not exist. Great advances have, however, been made in recent years and methods of analysis are now available which make possible a much closer approach to exact treatment. These have so far received less attention in this country than abroad.

There are, however, signs of increasing attention to the subject in this country and inquiries received at the Building Research Station suggest that engineers are becoming increasingly aware of the assistance which this new science can give in accurate and economical design. The soil mechanics section at the Station has been strengthened, though it is still perforce on a modest scale. But it is hoped that support may be forthcoming from outside bodies interested, to expand it to a further and considerable extent, in order to accelerate both fundamental research and work directed to the solution of problems of immediate practical interest.

A summary of the present position of the work at the Station is contained in the Report. This indicates that the two aspects of soil research that have received most attention are the settlement of structures and the stability of earth slopes.

Settlement of Structures.

Perhaps the most important difference between the older ideas and those of modern soil mechanics on the settlement of structures, lies in the method of approach to the problem. In the past, the design of a foundation was based largely on the conception that the type of soil alone governed the pressure which could be imposed upon it. The modern method seeks rather to understand the mechanism by which settlements take place and, starting from a consideration of the structure itself, lays stress on the difference in settlement which can be allowed between different portions of the structure.

An outline is given of the method used in estimating and analysing the settlement of a structure. It is based upon the laboratory examination of soil samples taken in an "undisturbed" condition from various strata beneath the structure. The apparatus used is known as the Terzaghi Oedometer, and from the results of these tests, together with a calculation of the distribution of pressure from the building in the subsoil, it is possible to estimate the amount of settlement which is to be expected in the building.

Observations, it is stated, have been made in connection with a new building, the Fire Offices' Committee Testing Station, at Elstree, and the results will shortly be published. During the year, facilities given by the War Office have made it possible to arrange for observations on several similar buildings in different parts of the country.

Stability of Earth Slopes.

The Building Research Station has had special opportunities during the past year for the study of earth bank failures on a practical scale. The various engineers concerned have given facilities for visiting the sites of embankment slips and to take samples and measurements; they have also made available their practical experience.

In the past there has been a tendency to consider that the safe angle at which an earth slope can be constructed depends only on the type of soil While this is approximately true for essentially granular soils, the idea must be considerably modified when clay slopes are considered. The Report points out that the stability of an earth slope depends upon the shear characteristics of the soil in the slope and in the foundation layers. The shear resistance of clay depends essentially on its cohesion, and in consequence, the maximum angle at which clay slope can stand without support decreases rapidly with increasing height. In addition, the influence of adverse weather conditions must also be taken into account, since the cohesive strength decreases with increasing moisture content.

Experience shows that slides in clay slopes take place along surfaces which have a conspicuous curvature approximating to a cylindrical form. Methods are described in the Report which have been developed for the analysis of the stability of slopes on the basis of the equilibrium of a segment by such a cylindrical surface.

The Cleaning of Stone Buildings.

Difficulties experienced in cleaning ancient stone masonry without damaging it have led to experiments which demonstrated that soot and dirt can be removed with ease from soot-blackened limestone, if the dirt is first softened by applying to it a fine, misty spray of water for a suitable time. During 1937, the promise of these laboratory experiments has been confirmed by practical trials on buildings. Preliminary tests, arranged through H.M. Office of Works, were carried out on three buildings in London, two of Portland stone, each about 70 years old, and one about 100 years old, of Bath stone. After spraying for one hour, it was found that the Bath stone could be brought to a good appearance by light brushing. After two hours, apart from its weathered appearance, the condition of the masonry could hardly be distinguished from new stone-work. Equally promising results were obtained on Portland stone.

These trials were so satisfactory that H.M. Office of Works decided to proceed with the complete cleaning of the Bath stone building and one of the Portland stone buildings. The results on the Bath stone building were very satisfactory. Delicate carving on parts of the face of the building, which could not have been cleaned by the old method of scrubbing with water, except by vigorous brushing involving some risk of damage, has been cleansed with ease and without injury by the spray method. The Portland stone building, which is situated in the City of London, was exceedingly dirty; the soot was greasier and more difficult to remove than on the Bath stone. But even here, most of the soot and dirt could be removed with ease after spraying for an hour or two.

For the cleaning of buildings, the Station has advocated the use of plain water only, but objection has been raised to this method of cleaning on account of the scrubbing that may be involved. The spray method meets that objection, and there is certainly no justification for using caustic soda or other harmful chemicals on the plea that they facilitate the cleaning process or minimise the risk of immediate damage.

Other work connected with the use of natural stones in building has related to the action of frost, the correlation of elastic properties and weathering quality, and the selection of Portland stone for sculpture and carving.

External Rendered Finishes.

A common trouble with rendered finishes is that, shortly after completion, the surface develops a network of hair cracks. This not only completely spoils the appearance of the work, but often creates a serious condition of dampness in the wall. The appearance of modern rendered work also often leaves much to be desired, quite apart from defects

due to cracking. Usually, when left by the plasterer, it presents a clean, attractive appearance, but, after a period varying according to the site and the aspect of the work, irregularities in colour appear, due to the surface discolouring at different rates.

The problem of rendered finishes has received the attention of the Station for a number of years and some experiments have been made in regard to the desirability of a modification in the materials as well as in the technique of application. In particular, consideration has been given to the advantage of using a weaker rendering mix as a means of minimising cracking.

On the Continent, types of rendering mixes and methods of application are used which differ considerably from those customary in this country, and the results appear in general to be more successful. In these circumstances, it was felt that much could be learnt by a study of Continental practice. Arrangements were accordingly made for a tour of various centres in Germany, Switzerland, Austria and Czechoslovakia. The survey included residential and manfacturing towns, since it was considered important how the rendered finishes behave, not only in places where the atmosphere was relatively pure, but also in polluted atmospheres, where the problem of producing a durable rendering which will maintain a good appearance is particularly difficult.

A very great deal was learnt, much of which it is hoped will prove of value to the building industry in this country. Continental practice differs from British practice in three main particulars: All external renderings are "thrown on" from the trowel, never "laid on" according to the plastering technique customary in this country; the procedure with each coat is exactly that used in applying "roughcast." It is the opinion of Continental plasterers that the flinging of the plaster makes for good adhesion and uniformity of texture and reduces the risk of crazing. The trend of modern practice on the Continent is in the direction of rough-textured surface finishes, and the scraping method is widely used. Large areas of rough-textured rendering, in various colours, finished by scraping, were seen in Vienna, which, after seven years' exposure, are free from cracks, attractive and clean. Cement is practically never used as the sole binding material in renderings. The usual material is a mixture of cement, lime and sand. Mortar mixed dry in a factory under controlled conditions is widely used. All that is required on the building site is the addition of water. There are self-evident advantages in such a procedure, especially where large areas have to be covered in a uniform texture. Since full-scale testing began at the Fire Offices' Committee Testing Station at Elstree, in May, 1936, 66 tests have been made on floors, beams and walls.

Wind Pressures.

In tests on wind pressures, which are being carried out on the Board's behalf at the National Physical Laboratory, a composite model is used representing about half a mile square of closely built-up area. The model is 10 ft. square and contains approximately one hundred model buildings. The pressure distrubution on a model building at the centre of the area is measured with various wind speeds and directions and the position and orientation of the model is also varied.

The Efficiency of Heating Systems.

The experiments conducted during the year in the new Heating Laboratory at the Building Research Station fall into two main groups. The first comprises tests in which the effect of altering the disposition of hot-water radiators in a room was studied; the second was arranged to provide a direct comparison between radiator heating, ceiling heating and floor heating and also to enable information to be obtained about the heat emission of extended-surface heating panels with various mean surface temperatures. It was found that there was little change in heat requirements when the radiators were moved from beneath the window and placed against an inner wall. But the experiments show that this position has several disadvantages. Foremost among these may be mentioned the fact that the conventional position produces remarkable uniformity in the heating, whereas the reverse is the case when the radiators are located against an inner wall. Moreover, the floor draught with the radiators in the latter position reached the figure of 33 ft. per min. at a height of 3 in. from the floor, while in the former it amounted only to 8 ft. per min. These are strong arguments in favour of the conventional position. In the second group of experiments, the results show that if radiator heating, with the radiators under the windows, is taken as a standard for comparison, the saving with floor heating in the unventilated test room is 11 per cent. and in the ventilated room about 6 per cent.; with ceiling heating the corresponding figures are 0 per cent. and 2 per cent.

Ventilation.

The Building Research Station is now directing attention to research on ventilation. Apparatus is being developed for surveying existing buildings to show how air circulates in the various rooms. For a complete survey three methods are being used. First, the direction of the air currents is traced by mica vanes, rather like weathercocks, or by extremely fine silk filaments. Smoke is then employed, either as white fumes formed by putting a few drops of titanium tetrachloride on a glass rod, or by using tobacco smoke. Finally, the paths of the pair currents are traced by toy baloons inflated by coal-gas and so balanced as to float in the air without rising or falling.

Glass Bricks.

During the year, the Report states, over 3,000 inquiries in special investigations were dealt with at the Building Research Station. These covered tests for manufacturers on many new building materials. A complete investigation, for example, is in progress on glass blocks used in masonry units, including their strength, water tightness, resistance to shock and temperature changes and their transmission of sound, light and heat. It is hoped, the Report states, that the data obtained will enable architects readily to decide when glass masonry can be used to the greatest advantage and to choose a form of block suited to their design.

Other special investigations referred to such things as acoustical problems, the efficiency of mortar mixers, damp penetration, rubber flooring, putty for glazing metal frames and numerous problems connected with painting, plastering and waterproofing.

The Wireless Loudspeaker.

Most of the inquiries on acoustical problems concern sounds in domestic buildings, wireless loudspeakers being the main subject of complaint. "It is quite evident," the Report states. "that the conventional 9 in. party wall in semi-detached dwellings does not provide sufficient insulation to reduce to tolerable limits the sound transmitted from a wireless loudspeaker or gramophone working at the sound level normally preferred, although just adequate for reduction of transmission of human speech. The difficulties in the way of dealing effectively with the problem of sound insulation in an existing building have been found, in the cases submitted, to be so serious that the importance of careful planning in the first instance cannot be too strongly emphasised. In the case of semi-detached houses the living rooms should be separated by the entrance hall, staircase, etc., and, if possible, bookcases and cupboards in bedrooms should be built against the party wall."

Smoky Chimneys.

Many inquiries concerned smoky chimneys, and it is believed that a solution of this problem has been found in an essay on the subject published by Count Rumford as long ago as 1796. The root of the trouble apparently lies in the design of the fireplace. The essentials for correct design laid down in this essay have been applied to modern fireplaces, and have been tested and demonstrated with marked success in more than 100 troublesome chimneys reported to the Station.

[An abridgement of Count Rumford's essay, with a note on practical tests on the treatment of smoky chimneys, appeared in *The Builder* of July 23, 1937.—ED.]

"Dry Masonry."

Among the special investigations carried out during the year, one of more than usual interest related to a system of construction known as "dry masonry" that originated in Austria. In this form of construction, special fibrous slabs take the place of the usual plastic mortar for laying bricks or hollow blocks. No filling is used in the vertical joints. The fibrous bedding consists of a sheet of long wood planings bound by cement. External walls are protected against the weather by rendering, and internal walls are plastered in the usual way. The advantages of this method are obvious: buildings can be erected more rapidly and in weather which would impede or prevent building in the ordinary way. Also, by obviating the use of joints containing a large proportion of water and the necessity for dipping bricks, buildings become habitable sooner and difficulties due to condensation and dampness during their early life will be minimised.

The comprehensive investigation undertaken in order to judge the applicability of this system under British conditions has grown that the use of small, light units, such as bricks, is not favourable to the success of the system for several reasons. The units do not settle down into the bedding sufficiently to become firm until several courses are added; irregularities in the shape of the bricks are troublesome; standard size clay bricks, being designed to allow for mortar joints on five faces, are unsuitable. The use of a resilient jointing material introduces a degree of flexibility into the wall quite out of proportion to that produced with a rigid mortar; therefore, to bring the flexibility within suitable limits the ratio of rigid to resilient material in the wall must be kept high. This can be done by using blocks about three times as deep as the ordinary brick. Such units, being heavier, will also bed, course by course, more firmly, and the wall will keep straighter during building. As a result of the investigation it has been possible to make definite recommendations in regard to the circumstances in which it may be appropriate to make use of the "dry masonry" system in this country.

FREEZING OF BUILDING MATERIALS

Building Research.

BUILDING Research Technical Paper No. 17, "Experiments on the Freezing of Certain Building Materials," by Dr. W. N. Thomas, M.A., D.Phil., M.Inst.C.E., recently issued by the Department of Scientific and Industrial Research and published by H.M. Stationery Office, price 2s. 6d. net, gives the results of extensive experiments which were begun at the Building Research Station and continued in the Engineering Department of University College, Cardiff.

For many years it was generally considered that frost was the most powerful agent in bringing about disintegration of building materials such as natural stone, brick, tiles and the like. Recent work has shown, however, that in a number of cases the damage attributed to frost action was, in fact, caused by other agencies, such as the crystallisation of salts in the pores or voids of the materials. Furthermore, disruption apparently due to frost action may be the cumulative effect of a sequence of causes, of which freezing is but the last.

In the Report, experiments are described which are intended to show the general behaviour of building materials to frost action and to determine in what ways frost resistance is dependent on the physical properties of the materials and the conditions of freezing.

NEW BUILDINGS IN LONDON

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Where business representatives cannot be seen personally at this stage, this should be mentioned. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

ALPERTON.—FACTORIES.—The Wembley T.C. has approved plans submitted by the Abbey Estates Development Co. for four factories and extension to a factory at Mount Pleasant.

BATTERSEA. — ALTERATIONS. — Messrs. Charrington and Co., Ltd., Anchor Brewery, Mile End-road, E.1, have submitted plans to the B.C. in respect of proposed alterations to the "Two Brothers" public-house, 110, Thessaly-road.

BERMONDSEY. — FACTORY.—The contract for the first section of the rebuilding and extension of factory and warehouse in Galley-wall-road, S.E., for Messrs. W. S. Shuttle-worth and Co., Ltd., has been placed with Messrs. Killby and Gayford, Ltd., 18, Wor-ship-street, E.C.2. The architects are Messrs. Minoprio and Spencely, AA.R.I.B.A., 18, Seymour-street, W.1.

BEXLEY. — SHOPS. — Messrs. Walker (Tooting), Ltd., Tooting Broadway, S.W.17, have secured the contract for nine shops with flats over adjoining Albany Park Station.

BLACKHEATH.—FLATS.—Mr. S. Everson, A.R.I.B.A., 1, Charlton-road, Blackheath, S.E., has prepared plans for a five-storey block of flats at 153-159, Shooters Hill-road, S.E. No contracts let.

BRENTFORD. — HALL.—The St. Nicholas Parochial Council have in view the erection of a new church-hall in Devonshire-road. The architect is Mr. G. L. Russell, A.R.I.B.A., 1, Broad-street-buildings, Liver-pool-street, E.C.2. No contracts let.

BRENTFORD. — EXTENSIONS. — Messrs. Tecalemit, Ltd., have under consideration large extensions to their factory at the Great West-road. Plans have been prepared by Sir Banister Fletcher and Son, F.R.I.B.A., 1, King's Bench-walk, Temple, E.C.4.

BRENTFORD. — EXTENSIONS.—And alterations, including an additional storey, are to be made to the St. John's Roman Catholic Schools, for the Rev. Father V. B. Nagel. The architects are Messrs. Adie, Button and Partners, 30, George-street, Hanover-square, W.1.

CARSHALTON. — ADDITIONS.—The Surrey E.C. has accepted the tender of Messrs. E. A. Thorn and Son, 1, Rosehill-parade, Rosehill, Sutton, at £21,063, for gymnasiums at four schools. The architects are Messrs. Jarvis and Richards, FF.R.I.B.A., 8A, Lower Grosvenor-place, S.W.1.

CATFORD.—FLATS.—Messrs. Saull-Hunt Constructions, Central House, Eden-street, Kingston, are erecting a three-storey build-ing containing nine flats at 45, Faversham-road.

CATFORD.—HOUSES.—The Lewisham B.C. has passed plans for Messrs. Wates, Ltd., 1258, London-road, S.W.16, to erect houses on Hall Park-estate (Cotton Hill), Catford.

CHELSEA.—FLATS.—About 30 in all, to be erected in Tite-street, S.W.3, to the plans of Messrs. Gordon Jeeves, 16, Hanover-square, W.1. The builders are Messrs. Richard Cos-tain, Ltd., Costain House, Upper Woburn-place, W.C.1, whilst the reinforced concrete engineers are Messrs. McCall and Co. (Sheffield), Ltd., 8-10, Grosvenor-gardens, S.W.1.

CHELSEA.—ALTERATIONS.—The B.C. are inviting tenders for alterations at 19a, Carlyle-square, and 38, Chelsea-square to convert the premises for use as an A.R.P. training centre and decontamination centre.

CITY-ROAD. — ALTERATIONS. — Mr. Alec Smithers, F.R.I.B.A., 27, Bunhill-row, E.C.1, is the architect for alterations in connection with a new passenger lift for the Royal London Ophthalmic Hospital. The contrac-tors are Messrs. Charles R. Price, of Bishopsgate, E.C.2.

CRICKLEWOOD. — EXTENSION. — Messrs. Wm. Moss and Sons, Ltd., North Circular-road, N.W.2, are the contractors for exten-sions to the factory on the east side of Clare-mont-road, N.W.2, for Messrs. Handley Page, Ltd.

EASTCOTE.—SHOPS.—And flats, 12 of each, are to be erected in Field End-road, for which a contract has been placed with Messrs. Ader and Sons, 2, Cavendish-avenue, New Malden. The plans have been prepared by Messrs. Knight and Co., 14, Cromwell-place, South Kensington, S.W.7.

EDGWARE.—ADDITIONS.—Are to be made to the nursing home, John Groom's Cripple-age, Edgware-way, for the John Groom's Crippleage, Messrs. W. H. Woodroffe and Son, 5, Bedford-row, W.C.1, are the archi-tects and Mr. Albert Monk, of Lower Edmonton, will be the contractor.

ENFIELD. — SHOPS.—Mr. J. N. Aylwin, A.R.I.B.A., 7, Park-lane, W.1, is the archi-tect for four shops with flats over to be erected in Hertford-road, Enfield Highway. The building work is being carried out by the owners.

FINCHLEY. — HOUSES. — The T.C. has accepted the tender of Mr. F. W. Taylor, Tooting, S.W.16, at £3,759, for six houses in Long-lane, N.3. Plans by Mr. Percival T. Harrison, M.I.C.E., 294, Regent's Park-road, N.3.

FOREST GATE.—GARAGES.—Mr. H. G. Needham, 139, Earlham-grove, Forest Gate, E.7, is the architect for garages in Romford-road, for the New London Rubber Tyre Co., Ltd., 15, High-street, Stratford, E.15.

FOREST HILL.—FLATS.—No contracts yet fixed for the flats at 5, 6, 7 and 8, Eliot Bank. Sir Chas. Ruthen and Co., 1, King's-mews, W.C.1, are the architects.

GREENFORD.—ADDITIONS.—Consisting of large offices and workshops are to be erected at the Glaxo Laboratories, Greenford-road, at about £20,000. The contract has been placed with Messrs. Richard Costain, Ltd., Costain House, Upper Woburn-place, W.C.1. Messrs. Wallis, Gilbert and Partners, 15, Elizabeth-street, S.W.1., are the architects.

HACKNEY.—ADDITIONS.—The B.C. recom-mend alterations and additions at the council's disinfecting and cleansing station in Millfields-road, at £2,900.

HAMPSTEAD.—FLATS.—The T.C. are in-viting applications from builders for 22 working-class flats at Garnett-road, N.W.3, and for 24 flats and 3 shops at New End, N.W.3.

HIGHBURY.—FLATS.—The site at the junc-tion of Leigh-road and Roseleigh-avenue, N., is to be developed by the Old Etonian Hous-ing Association. Plans for about 40 flats have been prepared by Mr. John Dower, A.R.I.B.A., 5, Verulam-buildings, Gray's Inn, W.C.1, and the contract has been placed with Messrs. A. T. Rowley (London), Ltd., Cam-bridge-works, Lordship-lane, N.17.

HILL-STREET. — FLATS. — Messrs. Hill Street Investments, Ltd., 93, Park-lane, W.1, are to erect a block of luxury flats at Nos. 41-49, for which plans have been prepared by Messrs. Lewis Solomon and Son, 21, Hart-street, W.C.1. The builders are Messrs. Marcus Estates, Ltd. (Construction Depart-ment), 93, Park-lane, W.1.

HOUNDSDITCH. — REBUILDING. — Messrs. Lewis Solomon and Son, New Oxford House, Hart-street, W.C.1, are the architects for the rebuilding of "The Nag's Head" public-house, 137, Houndsditch. The contractors are Messrs. Higgs and Hill, Ltd., Crown Works, South Lambeth-road, S.W.8.

HOUNSLOW WEST. — SHOPS.—A site in Bath-road has been sold to clients of Mr. Douglas Martin, Hendon Central, N.W.4, for a block of 24 shops with 54 flats in the upper floors. The architect is Mr. H. A. E. Gid-dings, 7, Raydean-road, Barnet. No contracts let.

ISLEWORTH.—SCHOOL.—The Heston and Isleworth T.C. have placed a contract with Messrs. G. H. Burgess, 135, Beresford-avenue, Tolworth, at £34,515, for a new senior boys' school at Smallbury-green. The school is for 560 places and the plans have been prepared by Mr. J. G. Carey, A.M.Inst.C.E., Borough Surveyor.

ISLINGTON.—HOUSING.—The B.C. has placed a contract with Messrs. Haymills (Contractors), Ltd., Hanger-green, Ealing, W.5, at £50,915, for 75 dwellings on the site of 1-10 (inclusive), Hillrise-road.

ISLINGTON.—FLATS.—Mr. Allan G. Brace, F.R.I.B.A., 88, Gower-street, W.C.1, has pre-pared plans for the development of the site at the junction of Halton-road and Sable-street, N.1, by the erection of a block of about 50 flats.

ISLINGTON.—ALTERATIONS.—And additions are to be made to the "White Conduit" public-house, 14, Bansbury-road, N.1, for Messrs. Huggins and Co., Ltd., 40, Palace-street, S.W.1. Plans have been prepared by the architect, Mr. C. J. Bailey, F.I.A.A. No contracts placed.

KENSAL GREEN.—CREMATORIUM.—Messrs. Walter Lawrence and Son, Ltd., Sun-street, E.C.2, are erecting at the St. Mary's Catholic Cemetery, a new crematorium, for the General Cemeteries, Ltd. The architect is Mr. G. Berkeley Wills, F.R.I.B.A., 7, Stone-buildings, Lincoln's Inn, W.C.2, and the quantity surveyors are Messrs. Drower and Son, 28, Victoria-street, S.W.1.

KINGSTON. — HALL. — The County of Surrey Territorial Army and Air Force Association, 16, Caxton-street, S.W.1, are erecting a drill-hall and anti-aircraft head-quarters in Portsmouth-road. Plans have been prepared by Messrs. Hatchard-Smith and Son, 11, Haymarket, S.W.1. The con-tractors are Messrs. Wates, Ltd., 1258, London-road, S.W.16.

KINGSBURY. — FLATS. — The Wembley T.C. has passed plans for Messrs. Gilbert Cole Estates, Ltd., for 54 flats in Fryent Way.

KNIGHTSBRIDGE.—FLATS.—The residence at No. 247 is to be reconstructed as high-class flats to the plans of Mr. H. J. Starkey, 15, Curzon-street, W.1. The contractors are Messrs. Higgs and Hill, Ltd., Crown Works, South Lambeth-road, S.W.8.

LEADENHALL-STREET. — ALTERATIONS. —And a new staircase are being carried out to the head office of the Marine Insurance Co., 159, Leadenhall-street, E.C.3. The com-pany's architects are Messrs. M. E. and O. H. Collins, FF.R.I.B.A., 115, Old Broad-street, E.C.2, and the contractors are Messrs. Charles R. Price, of Bishopsgate, E.C.2.

LEWISHAM.—PREMISES.—Messrs. Whit-bread and Co., Ltd., Chiswell-street, E.C.1, are to have new licensed premises to be called the "Rising Sun" erected at Loampit Vale, Lewisham. Mr. P. H. Bank, F.R.I.B.A., F.S.I., A.M.I.Struct.E., F.R.Arb., is the brewery company's architect and the building contract has been placed with Messrs. W. Loweth and Sons, Ltd., 67, Downs Park-road, E.8.

LEWISHAM.—STORE.—The Royal Arsenal Co-operative Society, Ltd., of Woolwich, are to erect a departmental store on a site bounded by Myron-place, Belmont-hill and Belmont-road. The plans have been approved.

LEWISHAM. — SHOPS. — The B.C. has passed plans for Mr. H. Brine for shops, flats and garages on the site at the corner of Dartmouth-road and Sydenham Park-road, and Albion-villas.

LEYTON.—BUILDING.—The T.C. are in-viting tenders for a new furnace room, flue and chimney stack at the senior boys' department at Cann Hall-road school, Leytonstone, E.11, and for alterations and extensions to the boiler house at Newport-road school, E.10. The plans are by Mr. John H. Jacques, F.R.I.B.A., 61, West Ham-lane, Stratford, E.15.

LONDON.—IMPROVEMENTS.—The work of lengthening platforms on the Bakerloo tube railway will cost £100,000. A contract for the work, involving alterations to 12 plat-forms, has been placed with Messrs. John Mowlem and Co., Ltd., 91, Ebury Bridge-road, S.W.1. Stations affected are Piccadilly-circus, Charing Cross, Oxford-circus, Water-loo, Trafalgar-square and Regent's Park.

MERTON.—FLATS.—An application has been submitted by Mr. W. P. P. Grant to the U.D.C. for 60 flats on land between Abbott Avenue and Kingston-road. Messrs. May and May, Ltd., 154a, Epsom-road, Sutton, are connected with the scheme.

MILL HILL.—ALTERATIONS.—Are to be carried out at the soldiers' quarters at the Mill Hill barracks, by Messrs. H. Lacey and Sons, of Luton, for H.M. War Office.

MILL HILL.—HOUSES.—The Hendon T.C. has approved plans for 40 houses on the east side of a new road off Dole-street, N.W.7, for Mr. A. Graham. The plans are by Mr. W. F. Thorpe, F.S.I., 26, The Broadway, N.W.7.

NEW CROSS.—EXTENSIONS.—Are to be made to the works of Messrs. Astley Cooper and Sons, Station-square, S.E.4. The con-tractors are Messrs. Thomas Sawyer and Son, Ltd., Roxley-road, Lewisham, S.E.13. The architect is Mr. H. A. Scrase, L.R.I.B.A., 16, St. Helen's-place, E.C.3.

NEW OXFORD-STREET.—REBUILDING.—Demolition and Excavation Co., Ltd., Collen-ham-road-yard, N.19, have demolished a large site at the junction of New Oxford-

street and High Holborn, W.C.1. The architect for the new building is Lieut.-Col. H. P. Cart de Lafontaine, F.R.I.B.A., 11, Suffolk-street, S.W.1, and the building contract has been placed with Messrs. Prestige and Co., Ltd., 149, Grosvenor-road, S.W.1. The quantity surveyors are Messrs. Gleeds, 106, Regent-street, W.1.

PARK ROYAL.—EXTENSION.—To works for the Diamond Blower Co., Ltd., Brent-terrace, N.W.10. The builders are Messrs. Lawrence Smith, Ltd., Ingram-way, Greenford. The architects are Messrs. Bostocks and Hollins, 6, South-road, Southall.

POPLAR. — ADDITIONS.—Messrs. Andrews and Gale, 135, Bow Road, E.3, are the architects for addition to the garage in Rosebank-road, over site of 41, St. Stephen's-road. No contracts placed.

POPLAR.—BUILDING.—Messrs. J. Westwood and Co., Napier-yard, E.14, are erecting a steel-framed building, West Ferry-road.

POPLAR. — PREMISES. — Messrs. Richard Ellis and Son, 37, Fenchurch-street, E.C.3, have submitted plans to the Council for a petrol filling station on the site of 1-7, Spring-gardens-place, Janet-street.

POPLAR. — REBUILDING. — Mr. G. L. Russell, A.R.I.B.A., 1, Broad-street-buildings, Liverpool-street, E.C.2, is the architect for the rebuilding of 242, Poplar High-street. No contracts placed.

POPLAR.—WAREHOUSE.—No contracts yet placed for the office and warehouse at 2-14, Trellis-street. Mr. R. S. Andrews, 135, Bow-road, E.3, is the architect.

ROYAL VICTORIA DOCKS.—WAREHOUSES.—The P.L.A. has accepted the tender of Messrs. Higgs and Hill, Ltd., Crown-works, South Lambeth-road, S.W.8, for the erection of five 3-storey warehouses. The contract, which includes five miles of railway sidings, roads and sewers, is valued at £730,000. Plans have been prepared by the chief engineer, Mr. W. P. Shepherd-Barron, M.Inst.C.E., Trinity-square, E.C.3.

STRATFORD. — FLATS.—Plans have been prepared by Mr. T. Spencer Rutter, 49, Bedford-row, W.C.1, for a block of flats (28) at 71, Carnarvon-road, E.15. No contracts let.

STRATFORD.—ALTERATIONS.—A contract has been placed with Messrs. Wood Bros., Vale-road, Forest Gate, E., at £1,368, for alterations to the premises in Hatfield-road for Messrs. Nodor Co. The architect is Mr. H. G. Needham, 139, Earlham-grove, E.7.

SUDBURY HILL.—SHOPS.—Plans have been prepared by Messrs. Marshall and Tweedy, FF.R.I.B.A., 96, New Cavendish-street, W.1, for a parade of shops and flats in Greenford-road. The contract for this has been placed with Messrs. George Moss (London), Ltd., Dorchester-road, Northolt Park.

SYDENHAM. — HOUSES. — Mr. Morris Joseph, A.R.I.B.A., 47, Bloomsbury, W.C.1, has prepared plans for 20 houses at "Woodthorpe," Thorpewood-avenue, which have been approved by the Lewisham B.C.

TOTTENHAM.—EXTENSIONS.—The Governors, Prince of Wales's Hospital, are to extend the nurses' home and reconstruct the X-ray block, at the Prince of Wales's Hospital, High-road. The architects are Messrs. Stanley Hall, Easton and Robertson, 54, Bedford-square, W.C.1. No contracts are likely to be placed for some time.

TOTTENHAM.—CLINIC.—The T.C. are inviting tenders for a clinic and creche at Park-lane, Tottenham, N.17.

WADDON.—EXTENSIONS.—Are to be made to the factory, Purley-way, of Messrs. Trojan, Ltd. The builders are Messrs. C. H. Gibson, Ltd., 509, London-road, Croydon. The architects are Messrs. Hooker and Rogers, 29, George-street, Croydon.

WATFORD. — FACTORY. — Messrs. Prove Bros. are to erect a factory building in Rickmansworth-road. The contract has been placed with Messrs. Cripps Construction Co., Ltd., 116, Putney Bridge-road, S.W.15.

WEMBLEY. — FACTORY. — Mr. F. H. Shearley, 336a, Station-road, Harrow, is the architect, and Messrs. Bovis, Ltd., 82, South Audley-street, S.W.1, are the builders for a new factory for Messrs. Collars, Ltd., in Strathcona-road, off Carlton-avenue East.

WEMBLEY.—CLINIC.—The T.C. has approved the scheme submitted by the Borough Engineer and Surveyor for the provision of a maternity and child welfare clinic at College-road, at £3,296. Tenders are to be invited.

WEMBLEY.—SHOPS.—The West Middlesex Investment Co., 125, High-street, Uxbridge, have had plans approved for 10 shops and maisonettes in Heather Park-drive.

WEMBLEY.—HOUSES.—The Borough Engineer and Surveyor is to prepare estimates for the erection on certain parts of Park-road, Kingsbury, of Council houses of a type suitable for aged persons.

WOODFORD.—ALTERATIONS.—The Essex C.C. are inviting tenders for alterations at Cowslip-road Council School.

WOOD GREEN.—PAVILION.—The T.C. are inviting tenders for a pavilion at the Perth-road playing field.

NEW CINEMAS

ARBROATH.—Associated British Cinemas, Ltd., 30, Golden-square, London, W.1, propose the erection of a cinema. The plans will be prepared by the company's architect, Mr. W. R. Glen, F.R.I.A.S.

DENNY.—The Dean of Guild Court has passed plans presented by the Commercial Cinematograph Co., Ltd., Dundee, to reconstruct the old Town Hall, which was destroyed by fire last year, and to erect on the site a cinema. Messrs. Spiers, Ltd., 257, West George-street, Glasgow, are the contractors for the work.

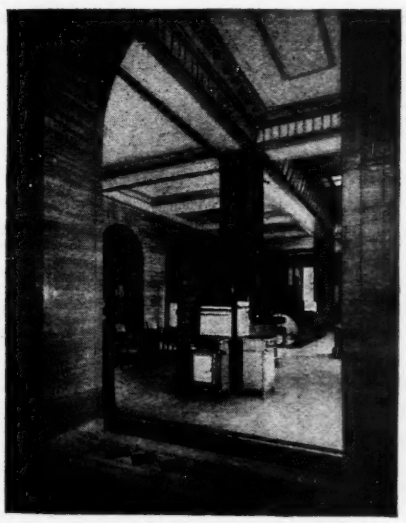
GOSPORT.—A site has been acquired in Forton-road by the Portsmouth Town Cinemas for the erection of a cinema.

NORTHWICH. — Mr. W. Peak, Dutton-street, Warrington, has secured the contract for the erection of a cinema in London-road for Cheshire County Cinemas, Ltd. The architects are Messrs. Wm. and Segar Owen, F.R.I.B.A., Palmyra-square-chambers, Warrington.

SHIRLEY (WARWICK). — The Danilo Cinema Co., 3, New-street, Birmingham, have acquired a site on the main Solihull-road for the erection of a cinema to seat 1,750.

STONE.—The U.D.C. have approved plans for the erection of a cinema in Stafford-street. The architect is Mr. Roland Satchwell, L.R.I.B.A., 6, New-street, Birmingham.

TWICKENHAM. — Associated British Cinemas, Ltd., 30, Golden-square, W.1, are to erect a cinema on the Fortescue House site, London-road. The architect is Mr. W. R. Glen, F.R.I.A.S.



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LIVERPOOL
ARCHITECTS: QUIGGIN & GEE FFRIBA

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PUBLIC WORKS

CAMBRIDGE.—The County Council have accepted a tender of £38,588 for the erection of the County Girls' Secondary School from Messrs. Coulson and Son, Ltd., builders, of Cambridge. The adaptation of the existing Girls' School for the reorganised Technical School involves further expenditure of £4,700.

GT. BRITAIN (Ministry of Health).—Following are notes on some loans sanctioned by the Minister of Health during the week ended June 11: Banstead U.D.C.—£10,435 for land for cemetery purposes; Berwick-upon-Tweed B.C.—£27,473 for 70 houses on Billendean-road site; Blackpool C.B.C.—£40,800 for works of sewerage; Consett U.D.C.—£30,860 for 80 houses on Dale-avenue site; Coulsdon and Purley U.D.C.—£37,400 for 200 acres at Riddlesdown and Merstham Manor as part of Surrey Green Belt; Depwade R.D.C.—£22,444 for works of sewerage and sewage disposal for parish of Redenhall with Harleston; Dorset C.C.—£121,556 for provision of County Council Offices in Colliton-park, Dorchester; Durham R.D.C.—£38,650 for 78 houses at West Rainton, 10 houses at Broomside and 23 houses at Witton Gilbert; Hyde B.C.—£44,606 for 120 houses on Walker-lane Estate; Kingston-upon-Hull C.C.—£24,843 for road works on Bilton Grange Estate; Lincoln, Parts of Lindsey C.C.—£35,900 for contributions towards cost of providing water supply in certain rural districts; Middlesbrough C.B.C.—£21,350 for 50 houses on the Brambles Farm Estate; Newport C.B.C.—£109,275 for a secondary sch.; Salford C.C.—£93,600 for new senior Council sch., Lower Broughton; Sedgley U.D.C.—£27,365 for 78 houses on the Beacon Estate; Swansea C.B.C.—£56,672 for 124 houses and 42 maisonettes on the Maes-y-Gelynen site; Weymouth and Melcombe Regis B.C.—£16,700 for new fire station.

GREAT BRITAIN. — Among contracts advertised in this issue by local authorities as being open to tender are: Wembley T.C.—Fire station, etc.; Croydon T.C.—20 flats at Kensington-avenue, Norbury, also buildings at East Croydon Station Goods Yard; Acton T.C.—Fire Brigade headquarters.

PENZANCE.—The Borough Council has decided to reorganise the elementary schools, at a cost of £40,000, including the cost of erecting new senior schools.

The General Electric Company, Ltd.

The annual general meeting of the General Electric Company, Ltd., will be held at Magnet House, Kingsway, London, W.C.2, on Monday, June 27. The report of the directors shows that the profits for the year ending March 31, 1938, amount to £1,772,181, to which has to be added the balance brought forward from the last account, £749,294, giving a total of £2,521,475.

After deducting £368,642 for depreciation, £4,287 for directors' remuneration, £54,008 contribution to Pension Fund, £86,288 dividend at the rate of 6½ per cent. per annum, less Income Tax, on "A" preference stock for the year ending March 31, 1938, £99,552 dividend at the rate of 7½ per cent. per annum, less Income Tax, on "B" preference stock for the year ending March 31, 1938, £400,000 transfer to taxation reserve, and £100,000 transfer to reserve account, there remains an available balance of £1,408,698, which the directors recommend should be appropriated as follows: Dividend at the rate of 10 per cent. per annum, less Income Tax, on the ordinary stock for the year ending March 31, 1938, £304,382, bonus of 10 per cent., less Income Tax, on the ordinary stock for the year ending March 31, 1938, £304,382, the amount to be carried forward being £799,934.

The directors report that the results of the year's trading constitute a fresh record in the history of the company. The profits amount to £1,772,000, an increase of £168,000 over last year, and reflect a period of exceptional prosperity, though there were signs of a slackening in demand during the latter portion of the year. Of the directors, Messrs. A. Chamberlain, J. H. Farthing, G. H. Ide and M. Solomon retire by rotation and, being eligible, offer themselves for re-election. The Earl of Clarendon and Mr. T. W. Heather have been appointed directors and offer themselves for re-election. The auditors, Messrs. George A. Touche and Co., offer themselves for re-election.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender, unless stated to the contrary. A dagger (†) denotes closing date for applications for particulars; other dates are those for the submission of tenders; the name and address at the end refer to the person from whom particulars may be obtained. Abbreviations: (A.) for A.R.I.B.A.; B. of E. for Board of Education; B.C. for Borough Council; B.E. for Borough Engineer; B.S. for Borough Surveyor; C. for Clerk; C.B. for County Borough; C.C. for County Council; C.E. for County Engineer; C.S. for County Surveyor; D.S. for District Surveyor; E. for Engineer; E.C. for Education Committee; (F.) for F.R.I.B.A.; (L.) for L.R.I.B.A.; M.W.B. for Metropolitan Water Board; M.H. for Ministry of Health; M.T. for Ministry of Transport; P.C. for Parish Council; R.D.C. for Rural District Council; S. for Surveyor; T.C. for Town Clerk and Town Council; and U.D.C. for Urban District Council.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, &c.

JUNE 28.

***Stoke-on-Trent T.C.**—178 houses, Meir (No. 3) site, Sandon-rd., Longton, and 42 houses, Vivian-rd. (No. 2) site, Fenton. Chief Architect, Kingsway-chambs. Dep. £5.

***Wilts C.C.**—Nurses' home, villa, cot and chair case bungalow, together with roads, sewers, and ducts, at Pewsey M.D. Colony. T. Walker (F.), County Architect, County Offices, Trowbridge. Dep. £2 2s.

***Worcestershire C.C.**—Gymnasium, etc., at Wattclose school, Bromsgrove, and additions at Silver-st. school, Wythall. A. V. Rowe, County Architect, 38, Foregate-st., Worcester.

JUNE 29.

Aberkenfig.—Employment exchange, for H.M.O.W. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

Bedfordshire C.C.—Renovation works, re-roofing and installation of water supplies at various Council schools. C.S.

Blackpool T.C.—Extensions and alterations to "Wynfield," Newton Drive. B.E. and S., Municipal Offices, Talbot-sq. Dep. £1.

Chorley T.C.—92 houses on Brown-st. site. B.S. Dep. £2 2s.

Clitheroe T.C.—Painting of houses. B.E. and S.

Coventry T.C.—170 houses at Pinley Fields site. E. H. Ford, City E. and S. Dep. £3 3s.

Edinburgh T.C.—Sub-station at Seafield depot. City Architect.

Fulham B.C.—Dwellings in Carnwath-rd. B.S. Dep. £1.

Lathingland R.D.C.—2 houses in Butt-ln., Burgh Castle. H. C. W. Blyth, architect, 62, London-rd. North, Lowestoft. Dep. £1 1s.

Lexden and Winstree R.D.C.—2 houses at Birch. Baker & Burton, architects, 3, Church-st., Colchester.

Manchester T.C.—Sub-structures for greenhouses, Wythenshawe-pk. City Architect. Dep. £1 1s.

Plymouth T.C.—Painting of schools. City E.

Reading T.C.—Redecoration and minor repairs at Reading School, Erleigh-rd. B.S. Dep. £1 1s.

Stocksbridge U.D.C.—180 houses and streets and sewers nr. Spink Hall. Douglas E. Robinson, S. Dep. £3.

Sturminster R.D.C.—26 houses. A. J. Allen, architect, Half Moon-st., Sherborne. Dep. £2 2s.

Sunderland T.C.—Hot-water supply installation for cubicle block at Infectious Diseases Hospital, Hylton-rd. B.E. Dep. £2 2s.

Sunderland T.C.—Central heating and domestic hot-water supply installation for cubicle block, Infectious Diseases Hospital, Hylton-rd. B.E. Dep. £2 2s.

Walsall T.C.—86 houses on Coalpool housing site, section 3a. B.S. Dep. £3 3s.

West Bromwich T.C.—Alterations to Greets Green school. D. Ellison, B.E. and S.

West Lancashire R.D.C.—Painting of 118 houses. R. Rosbotham, S., 52, Derby-st., Ormskirk.

Wimbledon T.C.—Sub-station in Columbia-av., Worcester Park. Chief E., Electricity House, Durnsford-rd., S.W.19.

JUNE 30.

***Acton T.C.**—Fire Brigade headquarters. B.E. Dep. £5 5s.

Belford R.D.C.—Convenience at Beadnell. Hetherington & Wilson, chartered architects, 27, Bondgate Without, Alnwick.

Brierley Hill U.D.C.—Fencing. R. H. J. Comber, E. and S.

Carmarthen C.C.—County offices. P. Thomas, 10, Cathedral-rd., Cardiff.

Chatham T.C.—Senior school for boys, Ordnance-pl. R. L. Honey (L.). Dep. £3 3s.

***Doncaster E.C.**—Materials for extensions to Oswin-av. school. H. A. Hickson, Hallcroft-chambs., 51, Hall Gate.

Feltham U.D.C.—Conveniences in recreation ground, Hatton-rd., Bedfont, and off High-st., Feltham. H. W. A. Carter, E. and S. Dep. £2 2s

Gillingham T.C.—School, Twydall-ln. B.S. Dep. £3 3s.

Great Yarmouth T.C.—Installation of central heating system in Isolation Hospital. S. P. Thompson, B.E. Dep. £2 2s.

Hampstead T.C.—22 flats, Garnett-rd., and 24 flats and 3 shops, New End. T.C.

Hythe T.C.—20 houses, with roads and services, at cemetery-ln., Horn-st., and 6 flats for aged people on "Beach Cottages," The Green. Jackson & Jackson, F./A.R.I.B.A., chartered and registered architects, 36, High-st. Dep. £1 1s.

Ince-in-Makerfield U.D.C.—140 houses off Pennington-ln. Thornley & Painter, architects, 11, Bishopgate, Wigan. Dep. £2 2s.

Kent C.C.—Hot-water and heating installation, County Hospital, Pembury. W. H. Robinson (F.), Springfield. Dep. £5 5s.

Kinross C.C.—16 houses at Milnathort. C. R. Douglas & Son, F.F.S., surveyors, Prudential-bldgs., Dunfermline. Dep. £1 1s.

London, H.M.O.W.—Extension to Bushy House, National Physical Laboratory, Teddington, roads and drainage at M/Agriculture, Addlestone. Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1 each.

Norfolk C.C.—Hospital at Little Plumstead. C.

Southend-on-Sea T.C.—School, Eastwood. F. W. Smith. Dep. £2.

Spenborough U.D.C.—Greenhouse at Royds Park, Liversedge. W. Wallbank, Acting S.

Swansea C.B.—Electric lighting and heating installations at the new and old buildings of juvenile instruction centre, Old Guildhall. Borough Architect. Dep. £2.

Warwick T.C.—Conveniences. R. Wormell, B.E. and S., 20, The Butts, Warwick. Dep. £2 2s.

West Riding C.C.—Painting and colour-washing, etc., at schools. A. Rayner, Education Office, Ecclesfield, Sheffield.

York T.C.—Painting work at various properties. Chas. J. Minter, City E.

JULY 1.

Ampthill R.D.C.—Electrical equipment in laundry of isolation hospital, Steppingley. Leonard Foster, S., Flitwick, Bedford.

Battersea T.C.—Installation of electric lift, meter and rental wiring store, Lavender Hill. B.S.

Birmingham T.C.—Painting work at Erdington House, Erdington. Public Assistance Officer, 102, Edmund-st.

Breconshire C.C. — Redecoration at schools. H. C. W. Strickland (F.), County Architect, Watton Offices, Brecon.

***Bristol T.C.**—14 cottages at Barrow Hospital, Barrow Gurney. Sir George H. Oatley, architect, 12, Great George-st. Dep. £1 1s.

Campbeltown T.C.—Houses. James Thomson & Sons, architects, 7, Victoria-pl., Airdrie.

East Riding C.C.—Painting, etc., various schools, police stations, and other property. County Architect, Beverley.

Edinburgh T.C.—Painting of houses in Stenhouse area. City Architect.

Gravesend E.C.—Repair and redecoration to Wrotham-rd. school and interior of Cecil-rd. school. Borough Architect, 5, Woodville-ter.

Leeds T.C.—Structural alterations to bridewell at town hall. J. E. Acfield, City E.

Northern Ireland Government.—Employment exchange, Strabane. Ministry's District Architect, Omagh. Dep. £1.

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***Ramsey U.D.C.**—32 houses. S. Dep. £2 2s.

Slough U.D.C.—Demolition works. C.

Tunbridge Wells Investment, Ltd.—107 houses, Southfield Park estate. A. Hargreaves, 17, Crook Log, Bexleyheath. Dep. £2 2s.

Twickenham T.C.—Building for filtration plant and alterations to form diving pit and other incidental works, at open-air swimming bath, High-st., Hampton. G. R. King, B.E. Dep. £1 1s.

Warrington.—Heating installation, etc., at admission nospital, Winwick. Richard Owen & Son, 3, Crosshall-st., Liverpool. Dep. £2 2s.

JULY 2.

†Border R.D.C.—12 houses at Dalston. Housing Officer, 5-7, Victoria-pl., Carlisle.

Bury T.C.—Decoration of schools. T.C. Dep. 10s.

Glamorgan C.C.—School works. C., Glamorgan County Hall, Cardiff.

***Hertfordshire C.C.**—Senior school, Hitchin Old Hale-way. C.

Isle of Ely C.C.—Cloakroom fittings. R. D. Robson, County Architect, March.

North Riding E.C.—School at Richmond. F. Barraclough, secretary, Northallerton.

***Norwich T.C.**—City Architect.

Okehampton T.C.—16 houses on Bray Hams housing estate, North-rd. R. Alan Brunskill, B.E. Dep. £2 2s.

Otley U.D.C.—Improvement to dressing accommodation at swimming pool, Wharfemeadows. S. Dep. £1 1s.

Soke of Peterborough E.C.—Painting and decorating and/or repairs at school. Walter J. Deacon, C., Bridge-st., Peterborough.

Stroud U.D.C.—External painting of houses. Frank S. Cutler, E. and S., High-st. Dep. £2 2s.

West Riding C.C.—Works at Mexborough secondary school. E. B. Stockdale, Clerk to the Governors, Education Office, Mexborough.

JULY 4.

Acton T.C.—52 dressing-boxes and cleaning down and restoration of Salisbury-st. elevation of baths. T.C.

Chelmsford.—Alterations to Head Post Office, for H.M.O.W. Room 65d, Third Floor, Office of Works, London, S.W.1. Dep. £1.

Dover T.C.—Painting and decorating works at schools. B.E.

Great Yarmouth T.C.—Alterations to school buildings, etc. B.E.

Hayes and Harlington U.D.C.—Demolition of Lake House, Botwell-ln., Hayes. F. J. N. Polkinhorne, E. and S.

Leeds T.C.—Hot-water heating installation to main hangar and part of terminal building at Leeds-Bradford Joint Municipal Airport, Yeadon, Yorkshire. J. E. Acfield, City E.

***Norfolk C.C.**—Additions to West Walton school. Secretary. Dep. £2 2s.

Nottingham T.C.—Hot-water service works, for Mapperley Hospital. E. G. Phillips, Son & Norfolk, consulting engineers, Arskus House, Annesley-grove.

***Orpington U.D.C.**—Sports pavilions in various recreation grounds. E. and S. Dep. £3 3s.

Oswestry T.C.—25 houses. A. R. Sampson, Architect and S., 18, Arthur-st. Dep. £2 2s.

Pudsey T.C.—Painting of 390 houses on various estates. B.S.

Rothwell U.D.C.—24 houses at Robin Hood estate. F. Hartley, Council Offices, Rothwell, nr. Leeds.

Southampton T.C.—Heating installations in connection with additions to Bitterne-pk. senior elementary schools, Manor Farm-rd. J. Roger Preston & Pinrs., consulting engineers, Dilke House, Malet-st., W.C.1. Dep. £2 2s.

Thirsk R.D.C.—20 houses and 12 bungalows at Sowerby. C. W. C. Needham (F.), 3, Duncombe-pl., York. Dep. £2 2s.

West Hartlepool T.C.—School, Dyke Houses estate. B.E. Dep. £5.

JULY 5.

Beeston and Stapleford U.D.C.—Repainting of 376 houses. Housing Inspector. Dep. £2 2s.

Camelford R.D.C.—Alterations and additions to cottage at Trewalder. A. R. Hansford, Camelford.

Crosby T.C.—24 semi-detached houses and 16 two-storey flats at Sandy-rd., Seaforth. J. R. Fothergill, B.E. and S. Dep. £2 2s.

East Dean R.D.C.—6 cottages at Townsend, Mitcheldean. S., 4, Belle Vue-rd., Cinderford. Dep. £1 1s.

***Ely R.D.C.**—86 houses, various parishes. H. L. Mullett (L.), 40, Regent-st., Cambridge. Dep. £2.

Gosport T.C.—Redecoration work at schools. A. Barlow, B.E.

Heston and Isleworth T.C.—Gymnasium, etc., at Bulstrode senior school, Hounslow. B.S. Dep. £2 2s.

Hornchurch U.D.C.—Recreation room for firemen off Billet-ln. D. E. Hart, S., Council Offices, Hornchurch.

London (M.W.B.).—Ash bunkers at Hampton works. Chief E., Room 201, 173, Rosebery-av., E.C.1. Dep. £10.

Market Bosworth R.D.C.—22 houses. Goddard & Wain, architects, Station-chambs., Coalville. Dep. £2 2s.

Marlborough and Ramsbury R.D.C.—12 houses at Little Avebury, Wilts. S. Dep. £2 2s.

Neath R.D.C.—42 houses, together with road works and sewers, at Adoldy-rd. housing site, Glynneath. J. T. Jones, F.S.I.S., 13, Orchard-st., Neath. Dep. £2 2s.

Northleach R.D.C.—4 cottages at Arlington, Bibury, and 8 at Dowdeswell. Kenneth B. Mackenzie (F.), Ablington, Bibury, Cirencester. Dep. £1 1s.

Seaton Valley U.D.C.—132 houses on New Hartley housing estate. S., Council Offices, Shiremoor. Dep. £2 2s.

Southend T.C.—Underground shelter at London-rd. Electricity Works. A. C. Johnson, Borough Electrical E. and Manager, Electricity Works, 85, London-rd.

JULY 6.

✱**Alton R.D.C.**—Cottages, Crows-ln., Farringdon. Bldg. S., Lenten-st. Dep. £2 2s.

Ballymoney B.C.—Dispensary and residence for Dirraw Dispensary District. R. Robinson, C.E.

Braughing R.D.C.—Convenience in High-st., Buntingford. Ernest G. Thody, S., Bridgefoot House, Buntingford. Dep. £1 1s.

Brimscombe (Glos.).—Telephone Exchange, for H.M.O.W. Room 65d, Third Floor, Office of Works, London, S.W.1. Dep. £1.

Burnley R.D.C.—4 houses in Burnley-rd., Briercliffe. Frank Hewitt, S., 22, Nicholas-st. Dep. £2 2s.

Bury T.C.—Town hall in Manchester-rd. Jackson & Edmonds, 24, Bennett's-hill, Birmingham, 2. Dep. £5 5s.

Caernarvonshire C.C.—House at Madryn, Bodvean, Pwllheli. County Architect, County Offices, Caernarvon.

Caistor R.D.C.—30 houses. J. P. Mason, S.

Forth.—100 houses of timber construction, for Scottish Special Areas Housing Association. Secretary, Scottish Special Areas Housing Association, Ltd., 73a, Shandwick-pl., Edinburgh, 2.

✱**Hove T.C.**—Public conveniences in Portland-rd B.S. Dep. £1 1s.

✱**Ormskirk U.D.C.**—Houses in Tower Hill. E. J. Wright, S. Dep. £2 2s.

Rochester, Chatham and Gillingham Joint Sewerage Board.—Reconstruction of roof of storm pump house at works at Motney Hill, Rainham. R. W. Watkins, C., 13, New-rd., Chatham.

Scottish Special Areas Housing Assoc., Ltd.—100 houses at Forth. Secretary, 73a, Shandwick-pl., Edinburgh, 2.

West Riding C.C.—Decorations to welfare centre, Rawmarsh, nr. Rotherham. West Riding Architect, County Hall, Wakefield.

Wood Green T.C.—Pavilion, Perth-rd. playing field. B.E. and S. Dep. £1 1s.

JULY 7.

✱**Brighton T.C.**—Child-welfare and ante-natal clinic, Whitehawk estate. B.E. and S. Dep. £2 2s.

Chesterfield T.C.—Assembly hall at New Whittington senior school. Wilcockson & Cutts, architects, 12, Saltergate. Dep. £2 2s.

Chesterfield T.C. — Painting and decorating at schools. Wilcockson & Cutts, architects, 12, Saltergate. Dep. £2 2s.

✱**Coventry T.C.**—500 houses. A. F. Underhill (L.). Dep. £5 5s.

Croydon T.C.—Fencing. B.E.

✱**Norwich T.C.**—Heating at Hellesdon Hospital. City E. Dep. £5.

Lichfield R.D.C.—8 houses, Longdon, and 10 houses, Drayton Bassett. J. G. Rimand, E. and S. Dep. £1 1s. each scheme.

Wandle Valley Joint Hospital Board.—Repair, painting and decoration at isolation hospital, Beddington Corner, Mitcham Junction. E. W. Gunner, C, Isolation Hospital, Beddington Corner, Mitcham Junction.

West Malling. — Telephone Exchange, for H.M.O.W. Room 65d, Third Floor, Office of Works, London, S.W.1. Dep. £1.

JULY 8.

Beckenham T.C.—Paddling pool at Alexandra recreation ground. Percy Parr, B.E. and S. Dep. £2.

Cornwall C.C.—Alterations to Truro police station. S. Pool (A.), County Hall, Truro. Dep. £2.

✱**Dunstable T.C.**—Decorative repairs, Chiltern-rd. estate. T.C. Dep. £1 1s.

✱**Erith U.D.C.**—Additional school repairs. E. and S. Dep. £1 1s. each.

Forehoe and Henstead R.D.C.—Water connections. R. N. Jones, C., 6, Tombland, Norwich.

✱**Midhurst R.D.C.**—Alterations to Old Vicarage, North-st. T. Greenfield (A.), Newstead, Midhurst, Sussex. Dep. £2 2s.

Nottingham T.C.—426 houses and flats. E. Phillips, Exchange-bldgs. East. Dep. £1.

✱**Ploughley R.D.C.**—24 pairs houses, various parishes. N. W. Harrison (F.), 5, Turl-st., Oxford. Dep. £2.

Roxburgh C.C.—Alterations at Newtown St. Boswells public school. Reid & Forbes, architects, 17, Great Stuart-st., Edinburgh. Dep. 10s. 6d.

Southampton.—Head Post Office garage, for H.M.O.W. Room 65d, Third Floor, Office of Works, London, S.W.1. Dep. £1.

JULY 9.

✱**Durham C.C.**—Water tower at school, Aycliffe, Heighington. T. Taliesin Rees & Richard Holt (FF.), 64, Rodney-st., Liverpool. Dep. £2 2s.

Eccles T.C.—Painting works. B.E. and S.

Glamorgan C.C.—Extensions, Penrhiwtyn public assistance hospital. Steward, Neath.

Luton.—Painting, High School, Alexandra-av.; alterations, High School, Alexandra-av.; and structural alterations and re-installation of electric light, etc., at Modern School, Park-sq., for Bedfordshire C.C. F. W. Smart, C.S., County Architectural Department, Shire Hall, Bedford. Dep. £1 1s. each contract.

Nuneaton T.C.—Cubicle block at Bramcote Isolation Hospital. B.S. Dep. £2 2s.

Preston T.C.—Extensions at Fishwick senior school. B.E. Dep. £2.

✱**Southend-on-Tea T.C.**—Engineering works, Municipal Hospital, Rochford, Essex. T.C.

Worthing.—Painting and decorating at various schools. P. E. Harvey, school architect.

JULY 11.

Bishop Stortford U.D.C.—72 houses at Hallingbury-rd. estate. S. Dep. £3 3s.

Chester T.C.—Additions at Isolation Hospital, Sealand-rd., and alterations at City Hospital, Hoole-ln. Charles Greenwood, City E. and S.

✱**Croydon T.C.**—20 flats at Kensington-av., Norbury. B.E. Dep. £2 2s.

✱**Erith U.D.C.**—Demolition of premises, High-st. E. and S. Dep. £1 1s.

Fareham U.D.C.—Pair of cottages at Westbury Manor. H. T. Privett, S. Dep. £1 1s.

✱**Finsbury B.C.**—Reparation and cleaning brickwork and stonework; painting internal and external of Ironmonger-row baths, and internal painting, Merlin-st. baths. B.E. Town Hall Annexe, Rosebery-av., E.C.1.

Leeds T.C.—8 garages, Parklands, Seacroft estate. R. A. H. Livett (A.), housing director, 26, Great George-st. Dep. £2.

✱**Leicester T.C.**—134 houses and 4 shops, Braunstone estate, and 16 houses, Northfield House estate. Housing Architect, 18, Highcross-st. Dep. £1 1s. each.

Luton E.C.—Installation of electric light at Norton-rd. school, and painting and decorating of interior and exterior of certain schools during the month of August. B.E. Dep. £1 1s. for lighting scheme.

✱**Norwich T.C.**—Alterations in connection with reorganisation of Angel-rd. schools. City Architect. Dep. £2 2s.

Scarborough R.D.C.—24 cottages. T. W. Whipp (A.), 15, Valley Bridge-parade.

JULY 12.

Brighton T.C.—266 houses on East Moulsecomb Estate. B.E. and S. Dep. £2 2s.

Cardiff T.C.—Electrical installation at Colchester-av. high school for girls. City Electrical Engineer, The Hayes. Dep. £1 1s.

Chelsea B.C.—Alterations at 19a, Carlyle-sq., and 38, Chelsea-sq., to convert premises for A.R.P. training and decontamination centre. James A. Gough, B.S., Town Hall, King's-rd., Chelsea, S.W.3. Dep. £2 2s.

Essex C.C.—Alterations to Woodford Cowslip-rd. Council school. J. Stuart (F.), Chelmsford. Dep. £2 2s.

Hornsey T.C.—Electricity showrooms and offices, The Broadway, Crouch End. T.C. Dep. £2 2s.

✱**London.**—Ordinary works and repairs to public buildings, etc., various districts, for H.M.O.W. Room 65D, Third Floor, Office of Works, S.W.1. Dep. 5s. each district.

✱**Oxford T.C.**—Public library, Temple-rd. E. and S. Dep. £2 2s.

Reading T.C.—Central fire station. B.S. Dep. £2 2s.

✱**St. Marylebone T.C.**—Repairs, etc., at Fisherton-st., housing estate, N.W.8. T.C.

JULY 13.

Blackpool E.C.—Redecoration of various schools during summer holidays. Director of Education, 51, Cookson-st.

✱**London.**—Ordinary works and repairs to public buildings, various districts, for H.M.O.W. Room 65D, Third Floor, Office of Works, S.W.1. Dep. 5s. each district.

✱**London H.M.O.W.**—Bramley telephone exchange, Surrey. Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1.

Penistone R.D.C.—7 houses in Moorend-ln., Silkstone Common, nr. Barnsley. Lunn, Heppenstall & Lunn, architects, Milnsbridge, Huddersfield. Dep. £2.

✱**Worcester.**—Earls Croom telephone exchange repeater station. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

JULY 14.

Bolton T.C.—Circular brick chimney at generating station, Back o' th' Bank. H. E. Annett, B.E. Dep. £1 1s.

✱**Goole (Yorks).**—Custom and Excise Office, for H.M.O.W. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

JULY 15.

✱**Cheshire.**—Eastham telephone exchange, for H.M.O.W. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

✱**Croydon T.C.**—Buildings at East Croydon Station Goods Yard. B.E. Dep. £2 2s.

JULY 16.

✱**Exeter T.C.**—Swimming bath. John Bennett (F.), City Architect. Dep. £5.

Tewkesbury T.C.—32 houses at High Perry Hill site. A. M. Sharp, B.S. Dep. £2 2s.

JULY 18.

✱**Bournemouth T.C.**—East Howe Infants', Hill View-rd. infants' and Boscombe senior schools. B.E. Dep. £2 2s. each.

✱**London.**—High speed tunnels, Teddington National Physical Laboraory, for H.M.O.W. Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1.

✱**Luton T.C.**—School at Stopsley and conveniences. J. W. Tomlinson (F.). Dep. £3 3s. and £2 2s.

JULY 19.

✱**London.**—Ordinary works and repairs to public buildings, various districts, for H.M.O.W. Room 65D, Third Floor, Office of Works, S.W.1. Dep. 5s. each district.

Sleaford U.D.C.—9 dwellings in Newfield-rd. S. F. Clare, S., 19a, Jermyn-st. Dep. £1 1s.

Tottenham T.C.—Clinic and creche at Park-ln. B.E. Dep. £5 5s.

JULY 20.

✱**Huddersfield T.C.**—Works. Education Architect, Peel-st. Dep. £2 2s.

✱**London.**—Ordinary works and repairs to public buildings, various districts, for H.M.O.W. Room 65D, Third Floor, Office of Works, S.W.1. Dep. 5s. each district.

✱**Oxford T.C.**—80 houses and 80 flats on various estates. City E. and S. Dep. £3 3s.

Birmingham T.C.—Observation blocks and boiler house, at Erdington House Institution. F. H. C. Wiltshire, T.C. Dep. £5 5s.

JULY 22.

✱**Bath T.C.**—538 houses, Roundhill and Whiteway estates. City E. Dep. £2 2s. each contract (Three contracts.)

JULY 25.

✱**Wembley T.C.**—Installation of low-pressure embedded pipe heating system, Northern Fire Station, Kingsbury. B. Treasurer, 117a, High-rd. Dep. £1 1s.

✱**Wembley T.C.**—Northern fire station, etc.; 16 firemen's houses, etc.; r.c. frame to fire station and r.c. floors and roofs, at Kingsbury. B. Treasurer, 117a, High-rd. Dep. £5 5s., £3 3s., £1 1s. and £1 1s. respectively.

MATERIALS, &c.

The materials for which tenders are invited normally include one or several of the following :—asphalt, bricks, brooms, building lime, cast-iron pipes, cement, concrete kerbs, etc., concrete tubes, drain pipes, glazed stoneware pipes, granite chippings, granite kerbs, gravel, gulleys, lime, manhole covers, painters' materials, plumbers' materials, road stone slates, stoneware pipes, sand, stone, tar, tarslag and bituminous macadam, timber, and whinstone screenings. Readers should obtain full particulars by personal inquiry.

JUNE 29.

Gravesend T.C.—B.E. and S.

JULY 1.

Hemsworth U.D.C.—C.

ENGINEERING, IRON AND STEEL.

JULY 1.

Breconshire C.C.—Reconstruction of Cross Bychan Joint Bridge and approaches—Hirwaun-Merthyr-rd. J. M. Richards, C.S., County Offices, Watton. Dep. £10.

JULY 8.

Galway C.C.—Swing bridges over Eglinton Canal. M. J. Kennedy, C.S., County-bldgs. Dep. £5 5s.

JULY 21.

Acton.—Widening of Chase-rd. bridge. Chief E., Paddington Station, W.2. Dep. £2 2s.

ROAD, SEWERAGE AND WATER WORKS.

JUNE 29.

Ealing T.C.—Drainage of convenience at Horsenden Hill. F. J. Forty, B.E. Dep. £1 1s.

Ealing T.C.—Making-up of Sandringham-rd., Northolt. F. J. Forty, B.E. Dep. £1.

Herne Bay U.D.C.—Making-up of Harcourt-dr. B. J. Wormleighton, E. and S.

Wanstead and Woodford T.C.—Street works. Armand D. Ward, B.E. and S. Dep. £2 2s.

JUNE 30.

Addlestone.—Roads and drainage at Ministry of Agriculture, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Cardiff R.D.C.—Making-up streets in Whitchurch. W. Farrow, E. and S., Park House, Cardiff.
Corporation of London.—Sewer works. E., Guildhall, E.C.2. Dep. £2 2s.
Johnstone.—Roads and sewers in connection with housing scheme at Sandyflat, for Scottish Special Areas Housing Assoc., Ltd. Sam Bunton, architect, 235, Bath-st., Glasgow.
Leeds T.C.—Street works. Highways E., 155, Kirkstall-rd.
Penarth U.D.C.—Sewer at Grove-ter. and Windsor-rd., Dingle. D. E. Morse, E. and S., 13, Victoria-rd. Dep. £2 2s.
Pudsey T.C.—Street works. B.S. Dep. £2.
Seaford U.D.C.—Street works. E. Sykes, S. Dep. £2 2s.

JULY 1.

Bury St. Edmunds T.C.—Street works. Roland H. Beaumont, B.S. Dep. £1 1s.
Poulton-le-Fylde U.D.C.—Street works in Avenue-rd., Normoss.
Southgate B.C.—Reconstruction of Brownlow-rd. D. M. MacTavish, B.E. and S. Dep. £2.
Warwickshire C.C.—Construction of Coleshill by-pass road. C.S., Shire Hall, Warwick. Dep. £5 5s.

JULY 2.

Bexley T.C.—Carriageways on housing scheme, Glenmore-rd., East Wickham. G. A. Joy, B.E. Dep. £2.
Godalming T.C.—Waterworks. E. G. Bowyer, Waterworks E., 35, Bridge-st., Godalming. Dep. £3 3s.
Kesteven C.C.—Reconditioning of road from Holland Railway crossing to Osbournby Cross-rds. C.S., County Offices, Sleaford.
Mansfield Woodhouse U.D.C.—Making-up of 2 streets. S.
Orpington U.D.C.—Relaying of foul water sewer at Crofton-rd. Thomas Watson, E. and S. Dep. £3 3s.
Plymouth T.C.—Making-up of 8 streets. J. Paton Watson, City E. and S. Dep. £1 1s.
Worcestershire C.C.—Reconstruction of Grovely-ln., Rednal. B. C. Hammond, C.S., County-bldgs., Worcester. Dep. £2 2s.

JULY 4.

Acton T.C.—Street works. B.E. Dep. £2 2s.
Cannock U.D.C.—Widening of Littleworth-rd., Hednesford. Robert Blanchard, E. and S., Council House, "The Green." Dep. £2.
Cowbridge R.D.C.—Sewers and other appurtenant works in Boverton and Llantwit Major. Thomas & Morgan & Ptnrs., engineers, 23, Gelliwastad-rd., Pontypridd. Dep. £2 2s.
Droxford R.D.C.—Lemon & Blizard, consulting engineers, Castle-st., Southampton. Dep. £5 5s.
Easthampstead R.D.C.—Main drainage at Amencorner, Binfield. Howard Humphreys & Sons, engineers, 17, Victoria-st., Westminster. Dep. £2 2s.
Enfield U.D.C.—Street improvements. Frank Lee, E. and S., 7, Little Park-gdns. Dep. £2 2s.
Hendon.—Main drainage. A. O. Knight, B.E. and S., Town Hall, Hendon, N.W.4. Dep. £4.
Kirkby-in-Ashfield U.D.C.—Street work. L. Dodsley, S., Public Offices. Dep. £1 1s.
Luton T.C.—Widening and reconstruction of part of New Bedford-rd. J. W. Tomlinson, B.E. and S. Dep. £2 2s.
Shrewsbury T.C.—Sewer. A. W. Ward, B.S.
Thirsk R.D.C.—Sewers, etc., on housing site at Sowerby. C. W. C. Needham, architect, 3, Duncombe-rd., York. Dep. £2 2s.
Uxbridge U.D.C.—Street works. E. T. Bolton, E. and S., 263, High-st. Dep. £2 2s.
Warsop U.D.C.—Tar spraying. B. C. Westwick, S., White Hart-chambs., Mansfield. Dep. £1.
Wilts C.C.—Widening and reconstruction of Lowbourne-rd., Melksham. H. S. Ganderton, C.S., County Offices, Trowbridge. Dep. £2.

JULY 5.

Aldershot T.C.—Sewers in Waterloo-rd. B.E. and S. Dep. £1 1s.
Chingford U.D.C.—Service road. S. J. Hellier, E. and S. Dep £2 2s.
Isle of Ely C.C.—Roads at 3 farms. County Land Agent, County Hall, March.
Leatherhead U.D.C.—Sewer works. J. L. Davies, E. and S. Dep. £1.
Leatherhead U.D.C.—Street works. J. L. Davies, E. and S. Dep. £1 1s.
London (M.W.B.).—Steel mains and connections at Hampton Works, Lower Sunbury-rd., Hampton-on-Thames. Chief E., 173, Rosebery-av., E.C.1. Dep. £10.

Public Appointments.

JUNE 27.

***Cardiff E.C.**—Assistant Lecturer. Director of Education.
Derby T.C.—Assistant Quantity Surveyor. C. H. Aslin (F.).
Leyton.—Clerk of Works. T.C.
London.—Junior Scientific Officer. Establishment Officer, Dept. of Scientific and Industrial Research, 16, Old Queen-st., S.W.1. Ref. J.38/6.
Manchester.—Assistant Lecturer in Building Construction. Registrar, College of Technology.
Portsmouth T.C.—Three Junior Assistants. City Architect.
Shrewsbury Technical College.—Woodwork and Building Subjects Instructor. C., County-bldgs.
Tottenham T.C.—Architectural and Surveying Assistant (Temp.). Acting B.E.
Watford T.C.—Architectural Assistant. B.E.

JUNE 29.

***Birmingham T.C.**—Two Factory Inspectors. City E. and S.
***Brandon and Byshottles R.D.C.**—Architectural Assistant (Temp.). A. A. Luxmore, C., 5, North Bailey, Durham.
***Lanchester Joint Hospital Board.** Clerk of Works. C.
North Riding E.C.—Clerk of Works. F. Barraclough, secretary.
***Poplar T.C.**—Technical Assistant (Temp.). B.E. and S.
Portsmouth T.C.—Senior Architectural Assistant. City Architect.

JUNE 30.

Bournemouth T.C. — Three Architectural Assistants and one Draughtsman (Temp.). B.E. and Architect.
Reading T.C.—Architectural Assistant (Temp.). T.C.

JULY 1.

Burton-upon-Trent T.C.—Architectural Assistant. B.E. and S.
***Camberwell T.C.**—Surveying and Architectural Assistant (Temp.).—B.E. and S.
***Guildford T.C.**—Surveyor's Assistant (Temp.). B.S.
London.—Design Master and Lecturer. Secretary, Northern Polytechnic, N.7.

JULY 2.

***Leeds T.C.**—Assistant Architect. R. A. H. Livett (A.).

JULY 4.

***Barking T.C.**—Clerk of Works. T.C.
***Folkestone T.C.**—Architectural Assistant (Temp.). T.C.
***Rochdale T.C.**—Clerk of Works. B.S.
***South Shields T.C.**—Junior Architectural Assistant (Temp.). T.C.
Staffordshire C.C.—Two Architectural Assistants. County Architect.
***Wycombe and District Joint Hospital Board.**—Clerk of Works. C.

JULY 5.

***Bradford T.C.**—Clerk of Works and Junior Architectural Assistant (Temp.). T.C.

JULY 6.

***Stoke Newington T.C.**—Surveying and Architectural Assistant (Temp.). T.C.
***Stourport-on-Severn U.D.C.**—Clerk of Works. C.

JULY 8.

***Luton T.C.**—Junior Architectural Assistant. B.E. and S.
***Southend-on-Sea T.C.**—Architectural Assistant. B.E.

JULY 9.

***Staffordshire E.C.**—Clerks of Works. Architect.
***Tottenham E.C.**—Two Clerks of Works. Director of Education.

JULY 11.

***Bootle T.C.**—Technical Assistant. B.E. and S.
***Gateshead T.C.**—Architectural Assistant (Temp.). B.E.

JULY 14.

***Isle of Ely C.C.**—Quantity Surveyor and Temp. Architectural Assistant. C., March.

JULY 15.

London.—Bitumen Foreman in Roads Dept., Cape Province, South Africa. Secretary to the High Commissioner for the Union of South Africa, South Africa House, Trafalgar-sq., W.C.2.

NO DATE.

***London.**—Assistant Quantity Surveyor. Crown Agents for the Colonies, 4, Millbank, S.W.1, quoting M/5903.
***London.**—Works Services Clerk. Chief Superintendent, Ordnance Factories (Advt. No. 226), Woolwich, S.E.18.
***London.**—Assistant Quantity Surveyors. Civil Engineer-in-Chief, Admiralty, S.W.1.
***London.**—Architectural Assistants. Chief Architect, Room 65A, Third Floor, H.M. Office of Works, S.W.1.
***London.**—Quantity Surveyor. Crown Agents for the Colonies, 4, Millbank, S.W.1, quoting M/5900.
***Manchester.**—Two Clerks of Works. D.C.R.E., East Lancs Area, 32, Mayfield-rd., Whalley Range.
***Staffordshire E.C.**—Senior Draughtsman (Temp.). Architect.

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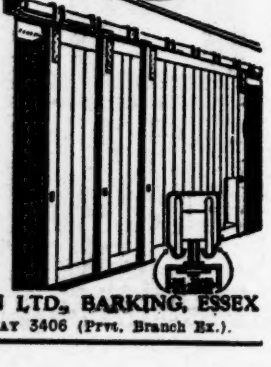
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CONTRACTS

(Continued from page 95.)

BOROUGH OF WEMBLEY.

TO BUILDERS AND REINFORCED CONCRETE SPECIALISTS.

The above COUNCIL invites separate TENDERS for the following CONTRACTS in connection with the ERECTION of the NORTHERN FIRE STATION KINGSBURY:—
Contract No. 1.—ERECTION of FIRE STATION, OUT-BUILDINGS and Incidental Works.
Contract No. 2.—ERECTION of 16 FIREMEN'S HOUSES and Incidental Works.
Contract No. 3.—ERECTION of REINFORCED CONCRETE FRAME to FIRE STATION.
Contract No. 4.—ERECTION of REINFORCED CONCRETE FLOORS and ROOFS.
Specification, Bill of Quantities (for part only), Drawings and Form of Tender for Contract No. 1, Specification, Bill of Quantities, Drawings and Form of Tender for Contract No. 3, and Specification, Drawings and Form of Tender for Contracts Nos 2 and 4 may be obtained from the Borough Treasurer, 117a, High-road, Wembley, on receipt of a deposit of Five Guineas for Contract No. 1, Three Guineas for Contract No. 2, and One Guinea each for Contracts Nos. 3 and 4, which will be returned on receipt of a bona-fide Tender with all documents intact. Cheques are to be made payable to "The Corporation of Wembley."
Conditions of Contract may be inspected at the Borough Engineer and Surveyor's Office.
No Tender will be received except in a plain sealed envelope, which must bear the words "Tender for Northorn Fire Station, Contract No, 1, 2, 3 or 4"; such envelope shall not bear any name or mark indicating the identity of the sender and must be delivered to the undersigned not later than noon on MONDAY, 25th JULY, 1938. The Council does not bind itself to accept the lowest or any Tender.

KENNETH TANSLEY,
Town Clerk.

Town Clerk's Office,
Wembley, Middlesex.
24th June, 1938.

ORMSKIRK URBAN DISTRICT COUNCIL.

TENDERS FOR SANITARY FITTINGS, ETC.

The above COUNCIL invite TENDERS for the SUPPLY and DELIVERY of SANITARY FITTINGS, GRATES, RANGES, GAS and ELECTRIC WASH BOILERS and DUSTBINS in respect of 26 HOUSES.
Specifications and Forms of Tender may be obtained from the Council's Surveyor at the undermentioned address.
Tenders must be returned to me in the sealed envelope provided, endorsed "Tenders for Sanitary Fittings, etc.," but bearing no name or mark indicating the sender, not later than 10 a.m. on WEDNESDAY, the 6th JULY, 1938.

JOSIAH TAYLOR,
Clerk to the Council.

Urban Council Offices,
Ormskirk.
21st June, 1938.

BOROUGH OF LUTON.

TO BUILDERS AND CONTRACTORS.

STOPSLEY COUNCIL SCHOOL.

TENDERS are invited for (a) the ERECTION and COMPLETION of a new JUNIOR MIXED SCHOOL at STOPSLEY and (b) the ERECTION and COMPLETION of new CONVENIENCES at STOPSLEY SCHOOL.
Persons desiring to tender for either or both of these Contracts must submit their names and addresses to the undersigned not later than Saturday, 2nd July, 1938, together with deposits of £3 3s. in respect of (a) and £2 2s. in respect of (b). The deposits will be returnable only to those who send in and do not withdraw bona-fide Tenders.
Copies of the Bills of Quantities and Forms of Tender will be supplied in due course to persons who apply as above.
Tenders, enclosed in the special envelopes provided, which must not bear any mark or seal indicating the Tenderer, should be forwarded to the Town Clerk, Town Hall, Luton, and reach him not later than noon on MONDAY, 18th JULY, 1938.
The Corporation do not bind themselves to accept the lowest or any Tender.

J. W. TOMLINSON, F.R.I.B.A.,
Borough Engineer and Surveyor.

Town Hall,
Luton.
21st June, 1938.

BOROUGH OF WILLESDEN

EDUCATION COMMITTEE.

TENDERS are invited for MINOR ALTERATIONS to BRIDGE-ROAD, CHAMBERLAYNE WOOD-ROAD and KENSAL RISE COUNCIL SCHOOLS.
Tender Forms, specifications and drawings may be obtained from Mr. F. Wayman Brown, A.M.I.C.E., Architect to the Education Committee, Education Offices, Dyne-road, Kilburn, N.W.6. Each tender must be accompanied by a deposit of £2 2s., which will be returned upon receipt of a bona-fide tender not subsequently withdrawn.
Tenders to be delivered in the envelope provided not later than 4 p.m. TUESDAY, 5th JULY, 1938.
The Committee does not bind itself to accept the lowest or any other tender.

E. DAVIES,
Director of Education.

Education Office,
Dyne-road,
Kilburn, N.W.6.
21st June, 1938.

ORDER THE BUILDER regularly and Avoid Disappointment

CURRENT AND PROPOSED BUILDING WORK*

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Where business representatives cannot be seen personally at this stage, this should be mentioned. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

Accrington.—B. Whittaker & Sons, Ltd., Huncoat, propose brickworks on south side of Burnley-rd.

Ainwick.—Scheme for electricity showrooms, for North-Eastern Electric Supply Co., Ltd., to proceed soon. Couves & Partners, architects, Carliol House, Newcastle-on-Tyne.

Andover.—T.C. approved:—92 houses at The Crescent, Weyhill-rd.

Ashby-de-la-Zouch.—Committee of Cottage Hospital propose isolation block, at £3,000.

Barrow-in-Furness.—N. R. England (A.), 20, Birley-st., Blackpool, architect for greyhound-racing stadium at Buccleuch Dock-rd., for Cavendish Park Sports Stadium, Ltd.

Battersea.—Plans passed: H. Wakeford & Sons, garages, Rush Hill-mews, and new drainage plans passed, "New Park Tavern," No. 25, Battersea Bridge-rd., W. J. Dixon & Sons, Ltd., on behalf of Watney, Combe, Reid & Co., Ltd.

Berwick.—Architect for 7 shops and 4 flats proposed by Ayton & Son is Col. G. Reavell, Lloyds Bank-chams., Alnwick. Tenders to be obtained within a short time.

Bewdley.—Mitchells & Butlers, Ltd., Cape Hill Brewery, Smethwick, propose rebuilding "Angel" hotel.

Birchington-on-Sea. — Board of Governors of Spurgeon's Orphans' Homes to provide additional accommodation for 20 children at Birchington Hall. Architects, Alexander Robertson & Sons, 27, Camberwell-green, S.E.5.

Birmingham.—Holt Brewery Co., Ltd., Holt-st., Birmingham, propose hotel, Abbeydale-rd., Northfield. Architect, J. B. Surman (F.), 19, Canon-st.

Bournemouth.—Block of flats to be erected in Chaddesley Wood-rd., Sandbanks. Plans by A. J. Searle & Partners, Theatre-chambs., Hinton-rd.

Brighton.—Plans prepared for block of flats in Clifton-rd. Architects, Newell & Burgess, 6, Half Moon-st., W.1.

Bristol.—Housing Committee recommended council to enter into an agreement with Greater London Properties, Ltd., for development of Filwood-broadway. Altogether 66 shops are concerned in the full scheme.

Cheltenham.—T.C. approved: Flower & Sons, foundation plan and calculations for new licensed premises, Whaddon-rd.; C. H. Brasher, extension to factory, Tivoli Box Factory, rear Tivoli-pl.; Gloucestershire E.C., additional classroom, Grammar School.

Chester.—T.C. approved: Alterations, 33, East-gate-st., for Westminster Bank, Ltd.; extension to offices, Newry Park, Brookhirst Switchgear, Ltd.—City S. submitted preliminary plans for proposed new senior school at Blacon, and Council resolved that plans be approved and submitted to B. of E.

Chesterfield.—E. Woodhead & Sons, Ltd., Church-ln., propose bakery and bacon department, Church-ln. Plans by W. A. Derbyshire, architect and surveyor, 26, Gluman-gate. Tenders to be shortly invited.

Chippingham.—T.C. approved:—Hall, Station Hill, Chippingham Liberal Trust, Ltd.

Chipping Norton.—Alterations be made at town hall, at £1,290, by council.

Conisborough.—Doncaster and Mexborough Joint Hospital Board approved amended scheme of additions at Isolation Hospital at £71,000. Walker & Thompson, architects, Doncaster.

Deptford.—B.C approved: A. R. Lyons & Sons, Ltd., 259, New Cross-rd., one-storey building at rear of 138-140, New Cross-rd.; Purvis & Purvis, 417, New Cross-rd., rebuilding of back additions at 129-131, Douglas-st.

Devizes.—Town Council to send M.H. for approval, plans of new market at Wharf to cost £7,300.

Eccles.—T.C. approved plans: 26 houses, Alexandra-rd., J. Grayson, 499, Liverpool-rd., Peel Green.

Gelligaer.—U.D.C. to apply to M.H. for sanction to borrow £9,000 for extensions to council offices.

Greenwich.—Plans approved: building comprising a range of kennels, kennel maid's room, vet's surgery, store and muzzling and weighing shelter, at the Charlton Stadium, Woolwich-rd.; blocks of flats, Crooms Hill House, The Yews and Clifton House, Crooms Hill; addition to main premises of T. Borthwick & Sons, Ltd., Borthwick Wharf, Borthwick-st.; store building, Woolwich-rd. (opposite Ransom-rd.); 3 blocks of flats, Blackheath-hill, Dutton-st. and Maidenstone Hill site; extension of Roan Works, Eastney-st.—drainage plans passed:—L. J. Speight & Partners, Ltd., Imperial House, Kingsway, W.C.2, addition to drainage system at Redpath Brown & Co.'s premises, Riverside works, Riverway; G. E. Weston & Sons, 35, Wellclose-sq., E.1, addition to drainage system at Johnson & Phillips, Ltd.'s sports ground, Weigall-rd.; Gee, Walker & Slater, Ltd., Fitzmaurice-pl., W.1, drainage system at Telcon-wks., Christchurch Way; Robert G. Muir, 1, Raymond-bldgs., Grays Inn, W.C., addition to "Fox Under the Hill," Shooters Hill-rd.

Halstead (Essex).—Eastern National Omnibus Co., Ltd., Chelmsford, to build large omnibus station. Plans by H. J. Starkey, 15, Curzon-st., W.1.

Haltwhistle.—Tenders being obtained by Northumberland C.C. for female casual block and master's house at institution. Plans by W. W. Tasker, County Hall, Newcastle-on-Tyne.

Handforth. — Halliday & Agate, architects, 14, John Dalton-st., to prepare plans for 30 houses, for U.D.C.

Hastings.—T.C. approved: Alterations to Queen's Hotel, Hastings, Queen's Hotel Co., Ltd., per Ward, Son & Wray, architects; rebuilding "Rising Sun" p.h., Battle-rd., St. Leonards, George Beer & Rigden, Ltd., per J. Thomson, architect; addition to St. Vincent's school, St. Saviour's-rd., St. Leonards, Sisters of Charity, Owners, per J. S. D. Hicks, architect; rebuilding "Royal Albert" p.h., Battle-rd., St. Leonards, George Beer & Rigden, Ltd., per J. Thomson, architect; rebuilding mission hall, Bourne-st., Hastings, Trustees of Wesley Mission Church, per S. G. Scales.

Hebburn-on-Tyne.—Extensions to be made to block of offices at works of A. Reyrolle & Co., Ltd. Cackett, Burns Dick & MacKellar, 21, Ellison-pl., Newcastle, architects.—Garage to be built adjoining shipyard of Hawthorn, Leslie & Co., Ltd. Plans by firm's own staff.

Hendon.—T.C. received M.H. formal consents to borrowing for Dole-st. school: Building works £24,995, and heating £1,118.—Plans passed: 26 flats, two corner plots of land junction of Page-st. and Town Planning-rd. No. 31, Miss R. Ford; 21 houses, Glenwood-rd., N.W.7, G. Wimpey & Co., Ltd.; workshop, Bittacy Hill, N.W.7, United Kingdom Optical Co., Ltd., per H. Wright & Tidmarsh; extension to Free Church, Central-sq., Hampstead Garden Suburb, N.W.11, Trustees Free Church, per J. W. Falkner & Sons, Ltd.; office adjoining joiners' shop, Bunns-ln., N.W.7, J. Laing & Son, Ltd.; 20 houses, Broadfields-av., Edgware, H. J. Hook & Son.

Huyton (Lancs).—Plans approved by U.D.C.: 76 houses, Ashbourne-cres., Beechburn-cres., and Beldon-cres., and 4 shops, junction of Huyton New-rd., R. Jones, Page Moss estate; 34 houses with garages, Tarbock-rd., H. James, Bellfield estate; hotel, Liverpool-rd., Greenall, Whitley & Co., Ltd., Wilderspool Brewery, Warrington.

Hyde.—Dean & Whipp, builders, Henry-st., propose 30 houses, Dowson-rd.—T.C. approved plans for lay-out of estate between Dowson-rd. and King Edward-rd., for Capt. H. C. Brocklehurst.

Islington.—B.C. to spend £1,125 on A.R.P. work.

Kettering.—A. W. Ruddle (F.), architect, Long Causeway, Peterborough, preparing plans for multiple store, High-st., Corby, adjacent to post office, for Sutton Coldfield Estates, Ltd.

King's Lynn.—Extensive alterations and additions to "Eagle" hotel, for Watney, Combe, Reid & Co., Ltd., London. Plans by J. H. Howard, The Cottage, Lower-st., Haslemere.

Lancaster.—T. D. Smith, Ltd., Penny-st., propose extensions to premises, Francis-passage. Architect, R. W. Jackson, 43, Church-st.

Leeds.—T.C. approved plans: Premises, York-rd., Hepton & Co. (Clothiers), Ltd., Sovereign-st.; central market, J. Castley, architect, 53, Victoria-st., S.W.1; 203 flats, Elmete-ln., Roundhay, H. W. Stevens, Roundhay; hotel, Belle Isle estate, J. Tetley & Sons, Ltd., Hunslet-rd.

Lewisham.—B.C. approved: William Harbrow, Ltd., chapel at Convent of the Ladies of Mary, Sydenham; G. T. & E. J. Harman, garages at 153-155, Sydenham-rd., Sydenham; New Ideal Homesteads, Ltd., houses at 147-165, Bexhill-rd., Brockley; United Dairies, Ltd., extend stables of Burnt Ash Farm, Baring-rd., Lee; Dartford Brewery Co., Ltd., garage and establish car park on site adjoining "The Bell" p.h., Lower Sydenham; D. E. Martin-Smith, stable buildings in Paragon-pl., Blackheath; Hartley's Garage, alterations and erect extensions to garage premises at 165-171, Stanstead-rd., Forest Hill; James Anderson, bridge over Granville-rd. at Chiesman's premises at High-st. and Granville-rd., Lewsiham; Boots, Ltd., addition at 55, Sydenham-rd.

Liverpool.—Health Committee to reconstruct steel footbridge over Leeds and Liverpool Canal at Ceres-st.

London (City).—Corporation approved: Building, junction of Joiners' Hall-bldgs., Greenwich-st. and Bell Wharf-ln.; rebuilding 12, Well-st.; rebuilding 1, St. Swithin's-ln. and 1 and 2, George-st.

Lye.—Holts' Brewery Co., Ltd., Holt-st., propose rebuilding "Railway" inn.

Mansfield.—District General Hospital Board propose wards at £40,000.

Market Drayton.—Trustees of Cottage Hospital propose extensions to buildings. W. H. Wainwright, architect, 24a, Cheshire-st.

Melksham.—U.D.C. approved: Layout plan for 191 houses in Beanacre-rd.

Morecambe and Heysham.—F. W. Woolworth & Co., Ltd., Water-st., Liverpool, propose store, part of Winter Gardens Fairground. Plans by Construction Department.

Newcastle-on-Tyne.—Plans by C. S. Errington, 46, Grainger-st., for factory in Benfield-rd., for Harrards, Ltd.; J. W. Taylor & Son, Union-chams., St. John-st., Newcastle, prepared plans for alterations and additions to Methodist Church in Dilston-rd. for Methodist Trustees.

Oldbury.—T.C. approved plans: 74 houses, Broadway, J. A. Haywood, Broadway; 42 houses, Newbury-la, C. McWhirter, "Gleneagles," Green-rd., Birmingham.

Ormskirk.—E.C. approved plans for Catholic senior school in Prescot-rd. with accommodation for 320, for Rev. J. A. Coyle. Cost £25,000.

Oswestry.—T.C. adopted sketch plan, submitted by architect, A. R. Sampson, for 19 houses on Banky Field site and 6 on Llwyn Farm estate.

Oxford.—Baptist Missionary Society to erect large collegiate buildings, to be known as Regent's Park College, in Pusey-st. and Pusey-ln. Plans prepared by T. Harold Hughes (F.), 204, George-st., Glasgow.

Portsmouth.—T.C. approved: R. J. Winnicott, 35 houses, Northern-parade; G. A. Day & Co., block of flats and showroom, London-rd. and Magdalen-rd.

Pwllheli.—T.C. purchased Central Restaurant for conversion into municipal buildings and offices.

Reigate.—Block of 9 shops and flats, "Holmfels," Bell-st., for Private Estates (Contractors), Ltd., 130, Croyson-rd., Wallington. Plans by Frederick Wheeler & Sons, 43, High-st., Sutton.

St. Albans.—R.D.C. to erect 20 houses at Wheathampstead.

Salford.—Rev. G. Wilson, 86, Claremont-rd., Pendleton, Vicar and Parochial Council of St. Paul's Church, Paddington, Pendleton, propose new schools.

Sheffield.—Thomas Rawson & Co., Ltd., brewers, Pond-st., propose licensed premises, Hemsworth-rd. and Ashbury-la.—Fowler & Marshall, architects, 3, Hartshead, preparing plans for development of land for houses off Greenland-rd. and Tinsley Park Wood.—T. R. Ibbotson, Dore, propose development of land at Newfield-la., Dore.—Buck, Lusby & Buck, architects, 34, Campo-la., preparing plans for motor showroom and garage, Broad-la.—John Richdale & Co., Ltd., brewers, Britannia Brewery, propose social club and flat, Penistone-rd. and Grove-sq.; Old Albion Brewery, Ltd., 71, Ecclesall-rd., propose social club and flat, Shirecliffe-rd.

Skelton.—H. C. Garbutt, 18, Albert-rd., Middlesbrough, prepared plans for concrete works for Cleveland Stone Products, Ltd.

Southampton.—T.C. approved: H. Collins, Swaythling Housing Society, Ltd., new street, sewers and 20 houses, off Mansbridge-rd.; Hamtun Estates, Ltd., 75 houses (amended drainage), Kathleen-rd.; A. J. Seal & Partners, Edwin Jones & Co., Ltd., 6 lock-up shops and offices (amended drainage), Hanover-bldgs.; R. Hanbury-Bateman, General Estates, Ltd., new streets and lay-out of 73 plots, Dibden Lodge Estate; Green & Rudgeley, W. J. Green, new street, sewers and 18 houses, off Archey-gr.; Fox & Sons, Davis Estates, Ltd., 44 maisonettes, Vale-dr. (plots Nos. 85 to 92, 145 to 154 and 233 to 236).

Southend-on-Sea.—O. H. Cockrill (A.), 35, Weston-chambs., Weston-rd., Southend-on-Sea, been appointed as architect to prepare plans for Church of St. Luke at Prittlewell. Cost, about £9,000.

Southport.—Tenders to be invited shortly for proposed senior school for Catholic Authorities of Church of Our Lady of Lourdes, Grantham-rd., Hillside, Birkdale. Architect, F. X. Velarde (A.), 3, Abercromby-sq., Liverpool, 7.

South Shields.—Tenders to be obtained by Tyne Improvement Commission for £195,000 quay at Tyne Dock. Plans by R. F. Hindmarsh, Chief E., Bewick-st., Newcastle-on-Tyne.—R.C. school to be built for Canon Burns. T. A. Page, Son & Bradbury, 75, King-st., architects.

Spennymoor.—Plans being prepared by W. Dixon & Son, 1, Collingwood-st., Newcastle, for workmen's social club to cost over £4,000, and also for an Order of the Buffaloes club at Wallsend-on-Tyne to cost over £3,000.

Stockton-on-Tees.—F. W. Turnbull, Carlton, Stockton, prepared plans for development of 5 acres of land near Beaconsfield-rd. on behalf of Kendrews, Ltd., builders, Norton House estate, Stockton.—Plans for extending nurses' home at Stockton and Thornaby Hospital, Bowesfield-ln., Stockton, been prepared by G. P. Stainsby, 25, High-st.—Architects for proposed bakery in Church-rd. for L. Tate, of Middlesbrough, are Archibald & Archibald, 23, Albert-rd., Middlesbrough.

Stourport.—Mitchells & Butlers, Ltd., Cape Hill Brewery, Smethwick, propose reconstruction and additions to "Seven Trow" p.h., High-st. Architects, Pritchard, Godwin & Clist (F.), Bank-chambs., Kidderminster.

Strood.—Plans prepared for 11 shops and 2 houses in Elaine-av. Architects, C. J. Curtis & Co., Carlton House, Regent-st., S.W.1.

Sunderland.—Tenders to be obtained shortly for church and vicarage in St. Nicholas' parish. Architects, Cordingley & McIntyre, The College, Durham.

Swansea.—Swimming baths and rackets courts to be erected for University College of Swansea at sports ground, Sketty-ln. Glendinning Moxham (F.), 18, Castle-st., appointed architect.

Wakefield.—Miners' Welfare Central Fund Committee propose pithead baths at Fox Pit Colliery, West Yorkshire, for 576.—Members of National Spiritual Church propose church for 150 people with school room, etc.

Walsall.—W. Butler & Co., Ltd., Springfield Brewery, Wolverhampton, propose hotel, Walstead-rd. and Bell-la. Architects, Jeffries & Shipley, Kings-court, Walsall.

Wembley.—T.C. received consents of M.H. to borrowing of £27,567 for building works at southern fire station (contracts Nos. 1, 2 and 3).—Plans passed:—F. & C. Costin, Ltd., 4 houses and 2 garages, Mount Stewart-av., and 13 houses and 6 garages, Shaftesbury-av.; Vactric, Ltd., 10 garages, Honeypot-ln.

Weston Green.—Newlands College estate to be developed by houses. Promoters, Coates & Stratton (Builders), Ltd., Bridge-rd., Chessington.

Whitehaven.—Cleator Moor Brewing Co., Ltd., The Brewery, Cleator Moor, Cumberland, propose rebuilding "Punch Bowl" inn. Architect, J. S. Stout (L.), 36, Lowther-st.—Miners' Welfare Central Fund Committee propose pithead baths for 1,490 at Haig Colliery.

Wimbledon.—B.S. to proceed forthwith with provision of children's paddling pond at Garfield-rd. recreation ground, at £310.

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*See also List of Contracts Open.

***In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. List of abbreviations on page 1252.**

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1938.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Crafts-men.	Lab-ourers.
Aberavon	1/7½	1/2½
Aberdare	1/7	1/2½
Abergavenny	1/7	1/2½
Abingdon	1/6	1/1½
Accrington	1/7½	1/2½
Aldeburgh	1/3½	11½
Aldershot	1/5½	1/1½
Alfreton	1/7½	1/2½
Alnwick	1/7	1/2½
Altrincham	1/7½	1/2½
Amble	1/7	1/2½
Amersham	1/6	1/1½
Ammanford	1/7½	1/2½
Andover	1/5½	1/1½
Ardingley	1/5½	1/1½
Arundel	1/5½	1/1½
Ascot	1/5½	1/1½
Ashby-de-la-Zouch	1/6	1/1½
Ashford (Kent)	1/5	1/0½
Ashford (Middlesex)	1/7½	1/2½
Ashington	1/7	1/2½
Ashtead	1/7½	1/2½
Ashton-under-Lyme	1/7½	1/2½
Aylesbury	1/5½	1/1½
Aylsham	1/4½	1/0½
Bagshot	1/5½	1/1½
Banbury	1/5½	1/1½
Barnsley	1/7½	1/2½
Barnstaple	1/5½	1/1½
Barrow-in-Furness	1/7½	1/2½
Barry	1/7½	1/2½
Basingstoke	1/5½	1/1½
Bath	1/6½	1/2
Batley	1/7½	1/2½
Beaconsfield	1/6	1/1½
Beccles	1/4	1/0
Bedford	1/6½	1/2
Berkhamsted	1/5	1/0½
Berwick	1/7	1/2½
Beverley	1/7½	1/2½
Bexhill-on-Sea	1/5½	1/1½
Bideford	1/5½	1/1½
Biggleswade	1/5	1/0½
Billericay	1/5	1/0½
Birchington	1/5	1/0½
Birkenhead	‡§1/9½	¶
Birmingham	1/7½	1/2½
Bishop Auckland	1/7½	1/2½
Bishops Stortford	1/6	1/1½
Blackburn	1/7½	1/2½
Blackpool	1/7½	1/2½
Blyth	1/7½	1/2½
Bognor Regis	1/5½	1/1½
Bolton	1/7½	1/2½
Bournemouth	1/6½	1/2
Bracknell	1/5½	1/1½
Bradford	1/7½	1/2½
Bradford-on-Avon	1/4½*	1/0½
Braintree	1/5½	1/1½
Brentwood	1/7	1/2½
Bridgwater	1/5½	1/1½
Bridlington	1/7	1/2½
Brighouse	1/7½	1/2½
Brighton	1/6½	1/2
Bristol	1/7½	1/2½
Broadstairs	1/5	1/0½
Bromsgrove	1/6½	1/2
Buckley	1/7½	1/2½
Bungay	1/3½	11½
Burnham-on-Crouch	1/4	1/0
Burnley	1/7½	1/2½
Burslem	1/7½	1/2½
Burton-onTrent	1/7½	1/2½
Bury	1/7½	1/2½
Bury St. Edmunds	1/5	1/0½
Buxton	1/7	1/2½
Byfleet	1/6	1/1½
Cambridge	1/7	1/2½
Canterbury	1/5	1/0½
Cardiff	1/7½	1/2½
Carlisle	1/7½	1/2½
Carnforth	1/7½	1/2½
Castleford	1/7½	1/2½
Caterham	1/7½	1/2½
Chard	1/4½*	1/0½
Chatham	1/6	1/1½
Chelmsford	1/6	1/1½
Cheltenham	1/6½	1/2
Chepstow	1/6½	1/2
Chertsey	1/6½	1/2
Chester	1/7½	1/2½
Chesterfield	1/7½	1/2½
Chichester	1/5½	1/1½
Chorley	1/7½	1/2½
Cirencester	1/5*	1/0½
Clacton	1/5½	1/1½
Cleveleys	1/7½	1/2½
Clitheroe	1/7½	1/2½
Cobham (Surrey)	1/6½	1/2
Colchester	1/6½	1/2
Colwyn Bay	1/6½	1/2
Congleton	1/7	1/2½
Coventry	1/7½	1/2½
Cranbrook	1/5	1/0½
Cranleigh	1/5½	1/1½
Crawley	1/5½	1/1½
Crewe	1/6½	1/2
Cromer	1/4½	1/0½
Crowborough	1/5½	1/1½
Cuckfield	1/5½	1/1½
Darlington	1/7½	1/2½
Darwen	1/7½	1/2½
Daventry	1/6	1/1½
Deal	1/5	1/0½
Denbigh	1/6	1/1½
Derby	1/7½	1/2½
Devizes	1/4*	1/0
Dewsbury	1/7½	1/2½
Didcot	1/5½	1/1½
Diss	1/4	1/0
Doncaster	1/7½	1/2½
Dorchester	1/5*	1/0½
Dorking	1/6	1/1½
Dover	1/5	1/0½
Dovercourt	1/5½	1/1½
Driffield	1/6	1/1½
Droitwich	1/6½	1/2
Dudley	1/7½	1/2½
Dunstable	1/5½	1/1½
Durham City	1/7½	1/2½
Eastbourne	1/6½	1/2
E.Glam. (Mon. Val.)	1/7	1/2½
East Grinstead	1/5½	1/1½
Edenbridge	1/5½	1/1½
Ely	1/4	1/0
Epping	1/7½	1/2½
Exeter	1/6½†	1/2
Exmouth	1/5½	1/1½
Fakenham	1/4	1/0
Falmouth	1/6	1/1½
Fareham	1/6½	1/2
Faversham	1/5	1/0½
Felixstowe	1/6	1/1½
Filey	1/6	1/1½
Fleetwood	1/7½	1/2½
Flint	1/7	1/2½
Folkestone	1/5	1/0½
Frinton-on-Sea	1/5½	1/1½
Frome	1/4½*	1/0½
Gainsborough	1/6½	1/2
Gateshead	1/7½	1/2½
Gillingham (Kent)	1/6	1/1½
Glossop	1/7½	1/2½
Gloucester	1/6½†	1/2
Godalming	1/5½	1/1½
Goole	1/7½	1/2½
Gosport	1/6½	1/2
Grantham	1/6½	1/2
Gravesend	1/7	1/2½
Great Yarmouth	1/5½	1/1½
Grimsby	1/7½	1/2½
Guildford	1/5½	1/1½
Guilsborough	1/6	1/1½
Halifax	1/7½	1/2½
Hanley	1/7½	1/2½
Harpenden	1/6	1/1½
Harrogate	1/7½	1/2½
Hartlepools	1/7½	1/2½
Harwich	1/5½	1/1½
Haslemere	1/5½	1/1½
Hastings	1/5½	1/1½
Hatfield	1/6½	1/2
Haywards Heath	1/5½	1/1½
Hednesford	1/7	1/2½
Hemel Hempstead	1/6½	1/2
Henley-on-Thames	1/5½	1/1½
Hereford	1/5½*	1/1½
Herne Bay	1/5	1/0½
Hertford	1/6½	1/2
Heysham	1/7½	1/2½
Hitchin	1/6	1/1½
Hoddesdon	1/6½	1/2
Holt (Norfolk)	1/3½	11½
Horley	1/5½	1/1½
Horsham	1/5½	1/1½
Horwich	1/7½	1/2½
Huddersfield	1/7½	1/2½
Hull	1/7½	1/2½
Hunstanton	1/4	1/0
Huntingdon	1/4½	1/0½
Ilfracombe	1/5½	1/1½
Ingatestone	1/5½	1/1½
Ipswich	1/6½	1/2
Isle of Thanet	1/5	1/0½
Isle of Wight	1/4½	1/0½
Keighley	1/7½	1/2½
Kenilworth	1/7½	1/2½
Kettering	1/7	1/2½
Kidderminster	1/6½	1/2
King's Lynn	1/5	1/0½
Kirkham	1/7½	1/2½
Knowle	1/7	1/2½
Lancaster	1/7½	1/2½
Leamington	1/7½	1/2½
Leatherhead	1/6½	1/2
Leeds	1/7½	1/2½
Leicester	1/7½	1/2½
Leighton Buzzard	1/4½	1/0½
Letchworth	1/6	1/1½
Lewes	1/5½	1/1½
Lichfield	1/6½	1/2
Lincoln	1/7½	1/2½
Littlehampton	1/5½	1/1½
Liverpool	‡§1/9½	¶
Llandudno	1/6½	1/2
Llanelly	1/7½	1/2½
London—		
12 m. radius	1/9*	1/3½
12-15 m. radius	1/8½*	1/3½
Long Eaton	1/7½	1/2½
Longton	1/7½	1/2½
Loughborough	1/7½	1/2½
Louth	1/6	1/1½
Lowestoft	1/5½	1/1½
Luton	1/7	1/2½
Macclesfield	1/7	1/2½
Maidenhead	1/6	1/1½
Maidstone	1/6	1/1½
Malvern	1/6	1/1½
Manchester	1/7½	1/2½
Manningtree	1/4	1/0
Mansfield	1/7½	1/2½
March	1/4½	1/0½
Margate	1/5	1/0½
Market Harborough	1/6½	1/2
Matlock	1/6	1/1½
Melton Constable	1/3½	11½
Melton Mowbray	1/6½	1/2
Merthyr Tydfil	1/7	1/2½
Middlesbrough	1/7½	1/2½
Middleton	1/7½	1/2½
Middlewich	1/6½	1/2
Milford Haven	1/5½	1/1½
Morecambe	1/7½	1/2½
Morley	1/7½	1/2½
Mundesley	1/4½	1/0½
Nantwich	1/6½	1/2
Nelson	1/7½	1/2½
Newark-on-Trent	1/6½	1/2
Newbury	1/5½	1/1½
Newcastle-on-Tyne	1/7½	1/2½
Newcastle-u-Lyme	1/7½	1/2½
New Forest	1/4½	1/0½
Newmarket	1/5½	1/1½
Newport, Mon.	1/7½	1/2½
Newport Pagnell	1/5½	1/1½
Northampton	1/7½	1/2½
Norwich	1/7½	1/2½
Nottingham	1/7½	1/2½
Nuneaton	1/7½	1/2½
Oakham	1/6	1/1½
Oldham	1/7½	1/2½
Ormskirk	1/7½	1/2½
Oxford	1/7	1/2½
Oxted	1/6	1/1½
Paignton	1/7	1/2½
Peterborough	1/7	1/2½
Plymouth	1/7½	1/2½
Pontefract	1/7½	1/2½
Pontypridd	1/7	1/2½
Portsmouth	1/6½	1/2
Port Talbot	1/7½	1/2½
Preston	1/7½	1/2½
Pulborough	1/5½	1/1½
Ramsgate	1/5	1/0½
Reading	1/6½	1/2
Redditch (Northern)	1/6½	1/2
Redhill	1/6	1/1½
Reigate	1/6	1/1½
Retford	1/6	1/1½
Rickmansworth	1/7	1/2½
Ripon	1/6	1/1½
Rochdale	1/7½	1/2½
Rochester	1/6	1/1½
Rugby	1/7½	1/2½
Saffron Walden	1/4	1/0
St. Albans	1/7	1/2½
St. Helens	1/7½	1/2½
St. Neots	1/4½	1/0½
Salisbury City	1/4½*	1/0½
Salisbury Plain	1/5½*	1/1½
Sawbridgeworth	1/5½	1/1½
Saxmundham	1/3½	11½
Scarborough	1/7	1/2½
Scunthorpe	1/7½	1/2½
Selby	1/7½	1/2½
Sevenoaks	1/6	1/1½
Sheerness	1/5	1/0½
Sheffield	1/7½	1/2½
Shipley	1/7½	1/2½
Shoeburyness	1/7	1/2½
Shoreham	1/6½	1/2
Shrewsbury	1/6½	1/2
Sittingbourne	1/5	1/0½
Skegness	1/6½	1/2
Sleaford	1/6	1/1½
Slough	1/6½	1/2
Southampton	1/7	1/2½
Southend-on-Sea	1/7	1/2½
Southport	1/7½	1/2½
South Shields	1/7½	1/2½
Spalding	1/5½	1/1½
Stafford	1/7	1/2½
Staines	1/6½	1/2
Stamford	1/6½	1/2
Stevenage	1/6	1/1½
Stockport	1/7½	1/2½
Stockton-on-Tees	1/7½	1/2½
Stoke-on-Trent	1/7½	1/2½
Stourbridge	1/7	1/2½
Stourport	1/6½	1/2
Stowmarket	1/4	1/0
Stratford-on-Avon	1/6	1/1½
Stroud	1/6†	1/1½
Sunderland	1/7½	1/2½
Sutton Coldfield	1/7½	1/2½
Swaffham	1/3½	11½
Swanage	1/5½*	1/1½
Swansea	1/7½	1/2½
Swindon	1/6*	1/1½
Tamworth	1/7	1/2½
Taunton	1/5½	1/1½
Tenterden	1/5	1/0½
Thames Haven	1/7½	1/2½
Thetford	1/4	1/0
Thorpe Bay	1/7	1/2½
Todmorden	1/7½	1/2½
Tonbridge	1/6	1/1½
Torquay	1/7	1/2½
Totnes	1/5½	1/1½
Trowbridge	1/4½*	1/0½
Truro	1/4½	1/0½
Tunbridge Wells	1/6	1/1½
Uppingham	1/6	1/1½
Uttoxeter	1/6	1/1½
Wakefield	1/7½	1/2½
Walsall	1/7½	1/2½
Walsden	1/7½	1/2½
Walton-on-Naze	1/5½	1/1½
Ware	1/6½	1/2
Warminster	1/4½*	1/0½
Warrington	1/7½	1/2½
Warwick	1/7½	1/2½
Wellingborough	1/7	1/2½
Wells (Norfolk)	1/3½	11½
Welwyn	1/6½	1/2
Welwyn Gar. City	1/7½	1/2½
West Bromwich	1/7½	1/2½
Westcliff-on-Sea	1/7	1/2½
Weston-super-Mare	1/6½	1/2
Weybridge	1/6½	1/2
Weymouth	1/5*	1/0½
Whitby	1/6½	1/2
Whitstable	1/5	1/0½
Widnes	1/7½	1/2½
Wigan	1/7½	1/2½
Wigton	1/6	1/1½
Willington	1/7	1/2½
Wilmslow	1/7½	1/2½
Winchester	1/5½	1/1½
Windermere	1/6	1/1½
Windsor	1/6½	1/2
Wisbech	1/4½	1/0½
Witham	1/5½	1/1½
Woking	1/6	1/1½
Wokingham	1/5½	1/1½
Wolverhampton	1/7½	1/2½
Woodbridge	1/4½	1/0½
Worcester	1/7	1/2½
Workington	1/6½	1/1½
Worksop	1/6	1/2
Worthing	1/5½	1/1½
Wrexham	1/7	1/2½
Wroxham	1/5	1/0½
Wycombe	1/6	1/1½
Wymondham	1/4	1/0
Yeovil	1/5½	1/1½
York	1/7½	1/2½

* Painters 1d. less than other Craftsmen. † Painters ½d. less than other Craftsmen. ‡ Plasterers 1/10

¶ Tradesmen's Labourers 1/4½. Navvies and General Labourers 1/3½

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

For Building Trade Wages in Scotland see page 1260.

CURRENT PRICES FOR BUILDING WORK IN LONDON.

Note.—These prices apply to new buildings only. They cover superintendence by foreman and carry a profit of 10 per cent. on the prime cost, without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts, and from 1s. 6d. per £100 Fire Insurance. The whole of the information given is copyright.

		£	s.	d.
PRELIMINARIES.				
Hoardings, with suitable gate, 8 ft. high	per ft. run	0	3	0
Steel scaffolding for brickwork	per sqre.	1	5	0
Steel scaffolding for stone building	,,	1	10	0
Steel gantry for stone building	per ft. run	2	10	0
Office, shed for cement and mess-room	say	75	0	0
EXCAVATOR.				
Digging, throwing out and filling into carts and carting to shoot, 5 ft. deep	per yd. cube	0	7	9
Add if stiff clay	,,	0	1	0
Add for every additional 5 ft.	,,	0	0	6
Add if in trenches	,,	0	0	9
Add to price of digging for breaking up concrete foundation and brickwork	,,	0	10	0
Return, fill and ram	,,	0	1	9
Fill into carts and cart away	,,	0	3	6
Planking and strutting to trenches	per ft. super	0	0	3½
Planking and strutting to sides of basement excavation next roadway	,,	0	1	4
Needling, flying and raking shores and removing after and carting away	per ft. cube	0	6	9
CONCRETOR.				
Portland cement and ballast concrete 1-6 in. foundations	per yd. cube	1	2	0
Add in underpinning in short lengths	,, ,,	0	6	0
Concrete in floors, ¾ in. aggregate, and sand, 1-2-4—				
4 in. thick	per yd. super	0	3	4
6 in. thick	,, ,,	0	4	8
Add if trowelled smooth	,, ,,	0	0	9
Add for hoisting, each floor	,, ,,	0	0	3
Concrete 1-2-4 in. beams and stanchions	per ft. cube	0	1	4
Concrete in lintols, with steel rod reinforcement each 4½ in. width and shuttering	,, ,,	0	4	0
1½ in. centering, with stout supports for concrete floors	per square	2	2	0
Do. to sides and soffites of beams	per ft. super	0	0	8
Do. to sides of stanchions	,, ,,	0	0	7
Steel rod reinforcement under ⅝ in. diameter, cut, bent and placed in position	per cwt.	1	8	0
Do. do. over ⅝ in. diameter	,,	1	5	0
BRICKWORK.				
Reduced to 1½ brick in flettons, lime mortar	per rod	26	0	0
Add for 2nd hard stocks	,,	8	0	0
Add for Blue Staffordshire	,,	22	0	0
Add to above if in 1-4 cement	,,	0	15	0
Add if in backing to stonework	,,	1	5	0
Add if in underpinning in cement	,,	4	10	0
Add if above 40 ft. to 60 ft. high	,,	2	0	0
SUNDRIES.				
Damp course in double course of slates, breaking joint	per ft. super	0	0	11
Vertical do. do.	,,	0	1	2
Bitumastic	,,	0	0	5
Lead core	,,	0	0	10
Cut, tooth and bond new to old brickwork	,,	0	1	0
Rake out joints of brickwork	,,	0	0	1
Leave chase for concrete floor	per ft. run	0	0	2
Cut chase 4½ in. deep for concrete floor	,,	0	1	2
Leave chase for vertical pipe	,,	0	0	4
Cut chase for vertical pipe	,,	0	1	4
Rake out joint for flashings and point	,,	0	0	2
Do. stepped do.	,,	0	0	4
Do. for asphalt skirting	,,	0	0	2
Build in ends of timbers	each	0	0	4
Do. steel joists up to 12 in. deep	,,	0	0	6
Do. step and make good facings	,,	0	1	6
Set and flaunch chimney pots	,,	0	7	6
Render fire openings	,,	0	2	0
Bed and point door frames one side	,,	0	3	0
Do. both sides	,,	0	4	6
Do. window frames, one side	,,	0	4	0
Setting only register grate	,,	1	0	0
Do. interior hearths and mantles	,,	1	15	0
Do. kitchen range, large	,,	5	0	0
Fix air brick and form flue	,,	0	2	0
Cut holes for pipes and make good facings, 9 in. wall	,,	0	2	0
Do. do. 13½ in. wall	,,	0	2	6
Do. large pipes and do. 9 in. wall	,,	0	3	0
Do. do. 13½ in. wall	,,	0	3	6
FACINGS.				
Extra for facings in Flemish bond for each 10s. per thousand over the price of Flettons	per ft. super	0	1	½
Pointing facings to approval	,,	0	3	
Arches extra over Flettons in stocks	,,	0	8	
Do. in reds	,,	1	0	
Do rubbed and gauged in putty	,,	5	9	

		£	s.	d.
PARTITIONS.				
2 in. breeze slab partitions in cement	per yd. super		4	0
3 in. do do.	,,		4	6
2 in. hollow-tile do.	,,		4	9
3 in. do. do.	,,		5	6
PAVING.				
1 in. granolithic paving gauged 5—2	per yd. super		2	7
1½ in. do. do.	,,		2	11
1 in. × 6 in. covered skirting	per ft. run		0	10
ASPHALT (NATURAL).				
½ in. horizontal damp course	per ft. super		0	6
¾ in. horizontal damp course	,,		0	8
½ in. vertical do. in two layers	per yd. super		9	6
½ in. in flats, two layers	,,		6	0
Angle fillet	per ft. run		0	3
6 in. skirting and angle fillet and jointing top edge			1	0
DRAINAGE.				
Excavate, trench for drain and throw out, return, fill and ram, and including any planking and strutting required, and cart away surplus earth per ft. run	1 ft. deep	0	5	
	2 ft. deep	0	10	
	3 ft. deep	1	3	
	4 ft. deep	1	8	
	5 ft. deep	4	2	
	6 ft. deep	5	0	
	7 ft. deep	5	10	
	8 ft. deep	6	8	
4 in. best quality glazed stoneware drain pipe, socketed joints, yarn and neat cement, on and including cement concrete bed, 18 in. wide and 6 in. thick, and benched up on each side of pipe	per ft. run		2	4
6 in. do. do. do. but concrete bed 20 in. and 6 in. thick	,,		3	0
9 in. do. do. do. but concrete bed 23 in. wide and 6 in. thick	,,		4	11
Extra for 4 in. bends	each		2	6
Do. 6 in. ,,	,,		3	6
Do. 9 in. ,,	,,		5	6
Extra for 4 in, junctions	,,		2	9
Do. 6 in. ,,	,,		3	9
Do. 9 in. ,,	,,		6	0
4 in. stoneware gully, encased in concrete and making good granolithic paving	,,		13	0
6 in. do.	,,		14	0
9 in. do.	,,		18	6
4 in. stoneware interceptor, and surround with concrete	,,	1	5	0
6 in. do.	,,	1	10	0
9 in. do.	,,	2	10	0
IRON DRAINS.				
4 in. C.I. drain and laying and jointing in molten lead	per ft. run		3	4
6 in. do. do.	,,		5	0
Extra for 4 in. bends	each		10	0
Extra for 6 in. bends	,,		18	0
Extra for 4 in. junctions	,,		17	6
Extra for 6 in. junctions	,,		30	0
MASON.				
Bath stone and all labour, fixed	per ft. cube		10	9
Portland stone and all labour, fixed	,, ,,		17	9
York stone templates, fixed	,, ,,		12	6
York stone steps, fixed	,, ,,		16	0
York stone cills, fixed	,, ,,	1	2	0
SLATER.				
24 × 12 Bangor slates laid to 3 in. lap secured with zinc nails	per square	3	18	6
20 × 10 do.	,,	3	13	6
16 × 8 do.	,,	3	11	6
Extra to eaves course	per ft. run		0	9
Extra to top edge and square abutments	,,		0	4½
Extra to verge and labour only, bedding and pointing	,,		0	7½
Raking, cutting and waste	,,		0	7
Half-round red ridge tile	,,		1	2
Half-round blue ridge tile	,,		1	8
Fixing only soakers	per dozen		0	9
Red hand-made sand-faced tiles laid to 4 in. gauge, nailed every fifth course with galvanised iron nails	per square	3	0	0
Extra to eaves course	per ft. run		0	5
Extra to top edge and square abutments	,, ,,		0	3½
Extra to verge and bed and point	,, ,,		0	11
Half-round ridge	,, ,,		1	4
Bonnet hips, including cutting and waste (both sides)	,, ,,		3	8
Valley tiles, including cutting and waste (both sides)	,, ,,		3	6
Fixing only soakers	per dozen		0	9

CURRENT PRICES FOR BUILDING WORK IN LONDON.—continued.

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per ft. cube	4	0
Do. joints	,, ,,	4	6
Do. roofs, etc.	,, ,,	5	3
Do. trusses	,, ,,	6	9

		¾in.	1in.	1¼in.
Deal rough close boarding	per sq.	32/-	38/-	47/-
Battens for slating	,,	10/-	11/-	12/-

		s.	d.
Centre for arches	per ft. super	1	6
Gutter boards and bearer	,, ,,	1	0

FLOORING.

		¾in.	1in.	1¼in.	1½in.
Deal edges shot	per sq.	—	41/-	49/-	58/-
Do. tongued and grooved	,,	—	46/-	55/-	67/-
Do. matchings	,,	42/-	47/6	—	—
Moulded skirtings, including backings and grounds	per ft. super	1/4	1/7	1/9	2/3
Mitres	each	-/6	-/8	-/9	1/-
Stop ends	,,	-/3	-/4	-/4	-/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half in. moulded sashes	per ft. super	1	9
Two in. do. do.	,, ,,	2	0
Add for fitting and fixing	,, ,,	0	2
Deal cased frames, 1 in. linings, 1¼ in. pulley and stiles, 2 in. moulded sashes, in squares, hardwood cill, double hung with pulleys, lines and weights, average size	,, ,,	3	3

DOORS.

		1¼in.	1¾in.	2in.
Two-panel square framed	per ft. super	2 1	2 3	2 5
Four-panel do.	,, ,,	2 4	2 6	2 9
Two-panel moulded both sides	,, ,,	2 6	2 9	2 11
Four-panel do. do.	,, ,,	2 9	2 11	3 2

		£	s.	d.
Flush doors. 1¾ in. to 2 in. finished thickness skeleton core, covered each side with Columbian pine ply, solid pine edging, 2 ft. 6 in. by 6 ft. 6 in.	each	1	15	0
Do., covered with Gaboon mahogany ply, solid mahogany edging, 2 ft. 6 in. by 6 ft. 6 in.	,,	2	0	0
Solid core, all as first item	,,	2	0	0
Solid core, all as second item	,,	2	5	0
Shaped peep holes, 4 sided	,,	0	5	0
Hexagonal holes	,,	0	6	0
Circular holes	,,	0	7	0

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per ft. cube	12	0
Hardwood do. do.	,, ,,	36	0

		1in.	1¼in.	1½in.
Plain deal jamb linings, framed	per ft. super	1 7	1 8	1 11
Deal shelves and bearers	,, ,,	1 2	1 4	1 7
Add if cross-tongued	,, ,,	-/2	-/2	-/2
Deal window board, tongued to oak cill and bearers	,, ,,	1 6	1 9	2 0
Deal moulding, tongued and grooved to window board	per ft. run			0 6

SUNDRIES.

		s.	d.
Deal architrave, including nitres per sectional inch.	per ft. run	0	1
Glazing beads, deal fixed	,, ,,	0	2
Do. fixed with brass screws and cups	,, ,,	0	4
Rebate	,, ,,	0	0½
Groove	,, ,,	0	0½
Notching	,, ,,	0	2
Tongued and grooved angle	,, ,,	0	3½
Rounded heel and hollow	,, ,,	0	2½

STAIRCASES.

		1in.	1¼in.	1½in.	2in.
Deal treads and risers on and including rough brackets	per ft. super	2/-	2/3	2/8	—
Deal strings, wrot and framed	,, ,,	—	—	2/2	2/8
Housings	each				0 9
Mahogany handrail, average 3 in. x 3 in.	per ft. run				5 6
Add if ramped	,, ,,				11 0
Add if wreathed	,, ,,			1	2 0

FIXING ONLY IRONMONGERY.

	s.	d.
Barrel bolts	0	8
Sash fasteners	1	0
Casement fasteners	1	2
Casement stays	1	2

FIXING ONLY IRONMONGERY—*Continued.*

	£	s.	d.
Flush bolts		1	6
Cupboard locks		1	6
Rim locks and furniture		2	0
Mortice locks and furniture		4	0
Floor springs, including oil	1	0	0
Overhead springs		5	0

FOUNDER AND SMITH.

		£	s.	d.
Rolled steel joists	per cwt.	1	1	0
Compound girders	,,	1	4	0
Stanchions	,,	1	6	0
Roofwork	,,	1	12	0

RAINWATER GOODS.

		3 in.	4 in.	5 in.	6 in.
Half-round eaves gutters and fixing	per ft. run	1/3	1/4	1/10	1/11
Ogee do. do.	,, ,,	1/5	1/6	2/1	2/9
R.W. pipe and fixing	,, ,,	1/7	2/1	—	—
Extra for shoes and bends	each	3/3	4/6	—	—
Do. stopped ends	,,	1/3	1/7	2/-	3/-
Do. nozzles and angles	,,	2/7	3/-	4/2	4/8

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. in flats	,,	39	0
Extra labour and solder in cesspools	each	6	0
Welt joint	per ft. run	0	4
Soldered seam	,, ,,	1	6
Copper nailing—close	,, ,,	0	3
Do. do. open	,, ,,	0	2
Soldered dots	each	2	0
Bossed ends to rolls	,,	0	6

	½in.	¾in.	1in.	1¼in.	1½in.	2in.	4in.
Lead overflow per ft. run	-/8½	1/-	1/6	1/9	2/1	2/9	—
,, service ,,	1/2	1/9	2/8	3/6	4/-	5/3	—
,, soil ,,	—	—	—	—	—	—	6/-
Bends in pipe each	—	—	—	—	1/9	2/-	5/6
Wiped solder joints ,,	1/9	2/3	2/6	3/-	3/4	4/-	5/9
Lead traps and cleaning screws ,,	—	—	—	6/6	9/6	—	—
Stopcocks and joints ,,	11/-	14/-	18/-	—	—	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yd. super	2	0
Do. narrow widths	per ft. super	0	4
Do. and set with Sirapite	per yd. super	2	3
Do. narrow widths	per ft. super	0	4
Do. and set with Keenes	per yd. super	3	0
Do. narrow widths	per ft. super	0	5½
Add sawn lathing	per yd. super	1	4
Add metal lathing (not including hangers or runners for suspended ceilings)	,, ,,	2	4
Portland cement screed	,, ,,	1	7
Do. plain face	,, ,,	3	3
Mouldings in plaster	per 1 in. girth	0	1½

GLAZIER.

		s.	d.
24 oz. sheet	per ft. super	0	7½
26 oz. sheet	,, ,,	0	8
24 oz. Obscured sheet	,, ,,	0	8½
Double Cathedral	,, ,,	0	9½
Majestic	,, ,,	0	10
Flemish	,, ,,	0	10
Pinhead Morocco	,, ,,	0	10
¼ in. rough rolled or cast plate	,, ,,	0	10½
¼ in. wired cast plate	,, ,,	1	1½

PAINTER.

		s.	d.
Preparing and distempering, two coats	per yd. super	0	7½
Knotting and priming	,, ,,	0	7
Plain painting, one coat	,, ,,	0	9
Do. two coats	,, ,,	1	2
Do. three coats	,, ,,	1	9
Do. four coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing, twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per ft. super	0	6
French polishing	,, ,,	1	2
Preparing for and hanging paper	per piece	2/- to 4/-	

PRICES CURRENT OF MATERIALS*

Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.

CHANGES OF THE WEEK.—Lead in all forms advances by £1.

BRICKS, &c.

Delivered to site, City and Central Area.

Full Lorry Loads	£ s. d.
Best Stocks	4 15 0
Second Hard Stocks	4 8 0

Per 1,000. Delivered at London Goods Stations.

½ in. Phorpres	King's Cross Station. per 1,000. s. d.	To sites in W.C. District. per 1,000. s. d.
Pressed bricks	46 3	50 6
Cellular bricks	46 3	50 6
Keyed bricks	48 3	52 6
Cellular Keyed bricks	48 3	52 6
Rustic bricks	*66 3	*70 6
Cellular Rustic bricks	*66 3	*70 6
Single Bullnose	64 3	68 6
White bricks	*66 3	*70 6
Sandfaced bricks	—	75 6

* Subject to a special discount of 2s. per 1,000 if accompanied by order for Pressed.

	£ s. d.
White Midhurst Facing Bricks (delivered London site)	4 0 0
Best blue Pressed Staffs	8 6 5
Do., Bullnose	8 16 6
Blue Wire Cuts	7 4 0

Best Stourbridge Fire Brick:—

£ s. d.	£ s. d.
2½ in. 7 15 0	3in. 8 15 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed		D'ble Str'tch'rs	32 10 0
		D'ble Headers	29 10 0
Stretcher	24 0 0	One side & two ends	33 10 0
Headers	23 10 0	Two sides & one end	34 10 0
Quoins, Bullnose and 4½ in. Flats	30 10 0	Splays and Squints	31 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

PHORPRES" HOLLOW PARTITION BLOCKS.

2"	per yd. sup..	2 3	3" per yd, sup. .. 2 9
2½"	" " ..	2 6	4" " 3 1

CLINKER CONCRETE.

2"	per yd. sup..	1 6	3" per yd. sup .. 1 10
2½"	" " ..	1 8	4" " 2 4

CRANHAM TERRA COTTA.

2"	per yd. sup..	3 0	3" per yd. sup. .. 3 8
2½"	" " ..	3 6	4" " 4 7

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 6
12" x 9" x 2½"	2 9
12" x 9" x 3"	3 0
12" x 9" x 4"	3 9

Per yard super d/d. Free on site, London.

	s. d.	
Thames Ballast	7 3	per yd.
Pit Ballast	6 3	" "
Pit Sand	7 9	" "
Washed Sand	8 3	" "
¾ in. Shingle	7 3	" "
¼ in. Broken Brick	11 3	" "
Pan Breeze	8 3	" "

delivered 2 miles radius Paddington.

CEMENT.

Best British Portland Cement. Standard Specification delivered London Area in jute sacks (11 to ton), or paper bags (20 to ton) free (non-returnable):—

	£ s. d.
4 ton loads and upwards site ..... Per ton	2 2 0
1 ton to 4 tons site	2 4 0
Alongside Vauxhall in 80-ton lots	1 18 0
"Ferrocrete" Rapid Hardening Cement:—	
4 ton loads and upwards site	2 8 0
1 ton to 4 tons site	2 10 0
Alongside Vauxhall in 80-ton lots	2 4 0

Stores in Reserved Bins at Works 1/6 ton extra.

NOTE.—Jute sacks are charged 1s. 6d. each and credited 1s. 6d. nett, if returned in good condition within three months, carriage paid.

"Aquacrete" Water Repellent, "Blue Circle" Cement, 30/- per ton extra on ordinary "Blue Circle" Portland Cement prices.

"Colorcrete" Nos. 1 and 2 Coloured Rapid Hardening Portland Cement in 1-cwt. paper bags free (non-returnable) in 1-ton lots and upwards site 3 9 0

"Colorcrete," not rapid-hardening, in 1-cwt. paper bags free (non-returnable), according to colour, from £7 to £15 10s. per ton.

"Snowcrete" White Portland Cement in 1-cwt. paper bags free (non-returnable) 1 ton and upwards site 8 15 0

Super Cement (Waterproof) paper bags free 3 12 0

Roman Cement £6 15 Keene's Cement, White 6 0 0

Parian Cement £6 0 " " Pink 5 12 6

Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	3 2 0	Sirapite, Coarse	2 10 0
" White ..	3 12 6	" Finish ..	3 18 0
Pioneer	3 10 6		
Super Carbo	2 7 6	4-ton loads & over London Area, paper bags free.	
Carbo Setting....	2 12 6		
Best Ground Blue Lias Lime	1 17 6	Grey Stone Lime	2 2 0
		Chalk Lime	2 2 0
Granite Chippings	1 12 0	Hair per cwt. ..	2 7 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in sacks 37s. per ton at rly. dep.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10½

BEER STONE—RANDOM BLOCK—

Free on rail at Seaton Station .. per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. " "	3 1½

Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

PORTLAND STONE—

	s. d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	5
Do. do. delivered on road waggons as above stations, per ft. cube	6

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every over 20 ft. *average* and ½d. beyond 30 ft.

HOPTON-WOOD STONE—

F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb.	14 0
Sawn two sides	22 6

HOPTON-WOOD STONE—

Sawn three or four sides	27 9

YORK STONE, BLUE.—*Robin Hood Quality.*

Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super	5 0
6 in. rubbed two sides, ditto .. "	5 6
in. sawn two sides slabs (random sizes) ..... "	8½
in. to 2½ in. sawn one side slabs (random sizes) ..... "	1 6½
1½ in. to 2 in., ditto ..... "	1 8½

HARD YORK—

Delivered at any Goods Station, London.

Scappled random blocks. ..... Per ft. cube	3
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super	5 1½
in. rubbed two sides, ditto .. "	6 1½
in. sawn two sides slabs (random sizes) ..... "	3 1½
in. ditto ditto ..... "	2 5
in. self-faced random flags. ... Per yd. super	7 6

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 6d.

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 17 0
Dry American and/or Japanese Figured Oak, per ft. cube ..... 10 0 to	0 12 6
Dry American and/or Japanese plain Oak, per ft. cube	0 11 6
Dry sq. edged Honduras Mahogany, per ft. cube	0 15 0
Dry log-cut Honduras Mahogany, per ft. cube ..... 12 6 to	0 16 6
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube. ...	0 10 6
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt. ..... 4 7 0 to	5 10 0

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£26 10	3 × 6	£22 10
4 × 9	26 10	3 × 11	23 10
4 × 8	24 10	2 × 11	26 10
4 × 7	24 10	3 × 9	23 10
3 × 8	22 10	2½ × 9	23 10
3 × 7	22 10	3 × 4½	22 0
2½ × 7	22 10	3 × 4	22 0

PLANED BOARDS.

1 × 11	£6 10	1 × 9	£25 0

PLAIN EDGE FLOORING.

Inches.	Per sq.	Inches.	Per sq.
¾	17/-	1¼	28/-
¾	20/-	1¼	35/-
1	22/-		

HUDDERSFIELD
Building Society

Experience has shown that the arrangements made by the Huddersfield to assist occupier borrowers have given the utmost satisfaction, and the service rendered has been greatly appreciated by builders' clients.

Write for information to The Huddersfield Building Society, Britannia House, 203, Strand, London, W.C.2, or to the Head Office, Britannia Buildings, Huddersfield. Andrew Stewart, C.A., Managing Director.

WHEN YOU INVEST—A HOUSE IS BEST

TONGUED AND GROOVED FLOORING.

Inches.	Per sq.
1	22/6
1¼	29/-
1½	36/-

MATCHING (BEST).

Inches.	Per sq.
½	18/-
¾	20/-
1	28/-

ins. BATTENS.	s. d.
¾ × 2 per 100 ft.	2 6

SAWN LATHS.	s. d.
Per bundle	2 4

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 5 0	18 by 10	16 10 0
22 by 12	26 5 0	18 by 9	14 17 6
22 by 11	23 12 6	16 by 10	14 7 6
20 by 12	23 2 0	16 by 8	11 6 0
20 by 10	20 15 0		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	4 2 6
ditto hand-made ditto	4 17 6
Ornamental ditto	5 2 6
Hip and valley tiles (per dozen) { Hand-made	0 8 6
{ Machine-made	0 8 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted.	£17 10 0
Plain Compound Girders	20 10 0
" " Stanchions	22 10 0
In Roof Work	27 10 0

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	18 5 0	⅝ in. to ½ in.	16 15 0
¾ in.	17 5 0	⅞ in. to 2½ in.	16 5 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £10 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars. Sizes. ⅛ in. to ⅜ in.	Sizes. ½ in. to 2 in.	Standard Flanges. Sizes. ¾ in. to 2 in.	Standard Fittings.
	%	%	%	%
Gas	60	65	62½	58½
Water	57	62½	62½	55
Steam	53½	58½	51½	50
Galv. gas..	50	55	51½	48½
Galv. water	45	50	43½	43½
Galv. steam	38½	43½	38½	40

C.I. HALF-ROUND GUTTERS—London Price ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3in.	1/9½	1/8	7d.
3½ in.	2/1	2/-	8½d.
4 in.	2/1	2/-	8½d.
4½ in.	2/2½	2/1	9d.
5 in.	2/4½	2/4	10d.

O.G. GUTTERS.

3in.	2/1	2/-	8½d.
3½ in.	2/3½	2/2	9½d.
4 in.	2/5	2/4	10½d.
4½ in.	2/6	2/5	1/0½
5 in.	2/10	2/9	1/2½

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in.	2/8½	1/8	2/5½
2½ in.	2/9½	1/11	2/11½
3 in.	3/8	2/4½	3/7
3½ in.	4/1	2/10½	4/1½
4 in.	4/9½	3/5	5/-

Less 20 per cent. trade discount.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock,

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
2in. per yd. in 6 fts. ..	3 5	2 5	2 11
2½ in. " ..	3 10	2 8	3 3
3 in. " ..	4 2	2 11	4 4
3½ in. " ..	4 7	3 3	5 0
4 in. " ..	5 1	4 0	5 10

L.C.C. COATED DRAIN PIPES.—London Prices ex Stock,

	Pipe. s. d.	Bends, stock angle, s. d.	Branches, stock angles. s. d.
3in. per yd. in 9ft. lengths	4 0	5 4	8 0

cwt. qr. lbs.			
4in.. 1 1 20..	6 0	6 3	11 0
5in.. 1 2 22..	8 4	11 0	16 11
6in.. 2 0 6 ..	10 0	12 10	21 3

Gaskin for jointing 45/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common Bars	13 15 0	..	14 15 0
Staffordshire Crown Bars— Good merchant quality. ...	15 10 0	to	17 0 0
Staffordshire Marked Bars ..	18 0 0	..	19 0 0
Mild Steel Bars.	13 10 0	..	14 10 0
Steel Bars, Ferro-Concrete quality, basis price	15 0 0	..	16 0 0
Hoop iron, basis price	15 0 0	..	16 0 0
" Galvanised	25 0 0	..	27 0 0

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*Cont.*)

IRON—	Per ton in London. £ s. d.	£ s. d.
Soft Steel Sheets, Black—		
Ordinary sizes, to 20 g. ..	17 5 0 ..	18 5 0
„ „ 24 g. ..	18 5 0 ..	19 5 0
„ „ 26 g. ..	19 5 0 ..	20 5 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	18 10 0 ..	19 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g. ..	20 10 0 ..	21 10
No. 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	20 0 0 ..	22 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	20 10 0 ..	24 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	22 10 0 ..	24 10 0
Sheets, Galvanised, Flat Best quality—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker ..	21 0 0 ..	24 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	22 0 0 ..	21 10 0
Best Soft Steel Sheets, 26 g.	23 10 0 ..	24 10 0
Cut Nails, 3 in. to 6 in. ..	19 10 0 ..	21 10 0
(Under 3 in. usual trade extras.)		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s.	d.
Seamless Copper tubes (basis)	per lb.	1	1
Strong sheet	„	1	3
Thin	„	1	4
Copper nails	„	1	3
Copper wire	„	1	3

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CRUTCH HEAD SCREW DOWN BIB COCKS FOR IRON. EASY CLEAN.

½ in. ¾ in.
32/- 47/- per doz.

CHROMIUM PLATED TOILET SCREW DOWN BIB COCKS FOR IRON. EASY CLEAN.

½ in. ¾ in.
42/- 61/6 per doz.

SCREW DOWN STOP COCKS FOR IRON.

½ in.	¾ in	1 in.	1¼ in.	1½ in.	2 in.	
27/6	42/6	75/-	181/-	264/-	409/-	per doz.

SCREW DOWN STOP COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
46/6	68/6	106/-	205/-	307/-	590/-	per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
7/6	10/6	16/-	29/-	39/-	56/-	per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	
36/-	59/6	96/-	205/-	278/-	per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.	
10/-	12/-	18/6	32/-	44/-	48/-	per doz.

BRASS FERRULES OR SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.	
10/-	12/-	22/6	31/-	45/6	per doz.

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1¼ in.	1½ in.	2 in.	3 in.	
8 lb. Lead P...	22/6	30/0	42/-	68/-	per doz.
8 lb. Lead S...	25/6	32/6	49/-	83/-	per doz.

SOLDER.—Plumbers' 1/2; Tinmen's, 1/4; Blow-pipe, 1/7 per lb.

PAINTS, &c.

		£	s.	d.
Raw Linseed Oil, in pipes	per gallon	0	2	6
„ „ „ in barrels	„	0	2	8
„ „ „ in drums.....	„	0	2	6
Boiled „ „ in barrels	„	0	2	11
„ „ „ in drums	„	0	3	1
Turpentine, in barrels	„	0	2	11
„ in drums (10 gals.)	„	0	3	1
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		49	0	0

Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Pauls," "Morganeswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered

	£	s.	d.
	68	0	0
Red Lead, Dry (packages extra) .. per ton	38	0	0
Best Linseed Oil Putty ..... per cwt.	0	14	9
Size. XD quality ..... fkn.	0	3	6

VARNISHES, &c.

		Per gallon.		
Oak Varnish	Outside	0	14	0
Fine Do.	„	0	16	0
Fine Copal	„	0	18	0
Pale Copal.....	„	1	0	0
Pale Opal Carriage	„	1	4	0
Best do.	„	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	„	0	18	0
Fine Copal Cabinet	„	1	2	0
Fine Copal Flatting.....	„	1	0	0
Hard Drying Oak	„	0	18	0
Fine Hard Drying Oak	„	0	19	6
Fine Copal Varnish.....	„	1	0	6
Pale do.....	„	1	12	0
Best do.	„	1	2	6
Best Japan Gold Size		1	12	6
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	6
Berlin Black		0	14	0
Knotting (patent)		0	15	0
French and Brush Polish		0	12	0
Liquid Dryers in Terebene		0	9	0
Cuirass Black Enamel.....		0	7	0

THE SCOTTISH BUILDER

NEW BUILDINGS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Where business representatives cannot be seen personally at this stage, this should be mentioned. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

ABERDEEN.—RECONSTRUCTION.—The University Court has approved of a scheme of reconstruction, to provide additional accommodation at Marischal College, estimated to cost £144,000.

ABERDEEN. — HOUSES.—Housing Committee of the T.C. have asked for tenders for 500 houses. At Kaimhill, 66 concrete cottages are to be built. At Tullos, 344 houses of granite and brick are to be erected. At Anderson-drive North and Hilton-road, 168 two-storied flatted granite houses are to be built.

ABERDEEN.—STORES.—The T.C. has decided to erect a new stores building at the rear of Mansefield-place.

ARMADALE.—HOUSES.—The T.C. has received the approval of the Department of Health for Scotland for 60 houses at Lower Bothville. The estimated cost of the scheme is £30,000.

DUNDEE.—BUILDINGS.—Plans lodged at the office of the City Engineer for approval: Balgillo-road, bungalows for Albert Thain, Ltd.; Clepington-road, additions for the North British Linoleum Co., Ltd.; Dalrymple-place, bungalows for the Angus Construction Co., Ltd., architect W. M. Wilson, 61, Meadowside; Graham-street, church for the Right Rev. Bishop Toner, architects, Allan and Friskin, 26, Castle-street; Livingstone-terrace, villas for Frank Livingstone, architect, W. M. Patrick, 26, Yeaman-shore; St. Andrew's-street and Cowgate, alterations for the Provincial Cinematograph Theatres, Ltd.

EDINBURGH. — MODERNISATION. — The Governors of George Heriot's School have decided to spend approximately £20,000 on modernising the school buildings.

FALKIRK. — SHOWROOMS.—The Dean of Guild Court has granted permission to the T.C. to proceed with new gas showrooms in High-street, at £10,000.

GLASGOW.—HALLS.—Plans in the hands of Mr. C. H. Vint, A.R.I.B.A., Salvation Army headquarters, Queen Victoria-street, London, for new halls in Lambhill-street, Possilpark.

GLASGOW.—PREMISES.—Messrs. J. R. and W. Laing, jewellers, Gordon-street, are to erect new shop premises in St. Vincent-street.

GOREBRIDGE. — EXTENSIONS.—The Midlothian C.C. have decided to proceed with extensions at the public school. Plans are by the County Architect, 10, Drumsheugh-gardens, Edinburgh.

HAMILTON.—HOUSES.—The T.C. has decided to proceed with 860 houses on the Fairhill housing estate.

KILMARNOCK. — RECONSTRUCTION.—Plans to be prepared for reconstruction and additions to the public school, by Mr. William Reid, architect, Wellington-square, Ayr.

LANARKSHIRE. — HOUSES.—The Lanarkshire C.C. are to erect 82 houses on various sites at Newarthill and Carfin, and 96 houses at Cambusnethan. Plans are by the County Housing Architect, Mr. William Brown, Clydesdale-street, Hamilton. The Council have also decided to erect 176 houses at Bonkle-road, Newmains, and 116 houses at Bargeddie.

(*Continued on next page.*)

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from April 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A^1	A^2	A^3	B	B^1
Craftsmen	1/8	1/7½	1/7	1/6½	1/6	1/5½
Labourers	1/3	1/2¾	1/2¼	1/2	1/1½	1/1¼

Aberdeen	A	Hamilton	A
Ayrshire	A	Inverness	*
Banff	B	Inverurie.....	A^1
Berwickshire	A^2	Kincardineshire	A^2
Bridge of Allan	A	Kinross-shire	A
Broughty Ferry	A	Lanarkshire	A
Clackmannanshire ..	A	Mid-Lothian	A
Doune	A	Monifieth	A
Dunblane	A	Moray and Nairn	B
Dumbartonshire	A	Newport.....	A
Dumfriesshire.....	A^1	Peebleshire	A^2
Dundee	A	Perth	A
Duncoon	A	Perthshire	A
East Fife (embraced by a line from Largo to Kingsbarns and eastward to the Coast)	B	Peterhead	A
East Lothian	A	Renfrewshire	A
Edinburgh	A	Rothesay	A
Fifeshire (with the exceptions of towns in East Fife which are under Grade B) ..	A	Roxburghshire	A^1
Forfarshire	A	St. Andrews	A
Glasgow	A	Selkirkshire	A^1
Greenock.....	A	Stewartry	A^1
		Stirlingshire	A
		Stornoway	A^1
		Tayport	A
		West Lothian	A

* This town has its own rates: Masons, 1/6; Carpenters, 1/6; Slaters, 1/6; Plumbers, 1/6½; Plasterers, 1/7, but 1/8 is paid owing to the scarcity at present; Painters, 1/6; and Labourers, 1/1½.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 1256

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY AND SELECTED GLAZING QUALITY.

	per ft. super.		per ft. super.
18 oz. O.Q.	2½d.	32 oz. O.Q.	5½d.
18 „ S.Q.	2⅝d.	32 „ S.Q.	6½d.
24 „ O.Q.	3½d.	Obscured Sheet, 18 oz.	3d.
24 „ S.Q.	3⅝d.	„ „ 24 „	4½d.
26 „ O.Q.	3⅝d.	Fluted .....21 oz.	9d.
26 „ S.Q.	4½d.	Em'lld 18 oz., 5½d., 24 oz.	6⅝d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

	Per ft. s. d.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ⅜ in..	6½d.
Rough cast double rolled, ½ in.	6½d.
Figured rolled, etc., white	6½d.
Figured rolled, etc., tinted	9½d.
Rolled Sheet	6d.
White rolled cathedral	6d.
Tinted rolled cathedral	8½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick.	0 9½
"Calorex" Sheet, 21 oz.	2 6
„ „ 32 oz.	4 0
„ Cast, ¼ in. thick	0 10
„ „ ⅜ in. thick	1 0
„ „ ½ in. thick	1 2

"VITA" GLASS.

Clearsheet—not exceeding 1 foot	1 0
„ „ 2 feet	1 3
„ over 2 feet	1 9
Polished plate not exceeding 1 foot	1 6
„ „ 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
„ larger sizes.....	1 6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet.....	1 0
3/16 in. Wired Georgian Design. Sizes up to 96 inches long by up to 24 inches wide	2 6

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	22 10 0
Pipe in coils	22 0 0
Soil pipe	27 10 0
Compo pipe	29 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills ..... per ton £12 5 0

ORMISTON. — CHURCH.—Plans are being prepared for a new Church of Scotland at Main-street, with accommodation for 500 people. The architect is Mr. T. Aikman Swan, 7, St. Colme-street, Edinburgh.

PAISLEY.—SCHOOL.—Plans are to be prepared for a new school at the north end on a site at Abercorn, the architect being Mr. George Boswell, 256, West George-street, Glasgow.

RENFREWSHIRE. — HOUSES. — Messrs. Lawrence, Ltd., Glasgow, are to erect 88 houses between Monteith-drive and the White Cart River, Eastwood.

ROTHESAY.—IMPROVEMENTS.—The Rothesay Harbour Trust have decided to carry out improvements to the harbour. The engineers are Messrs. J. B. Brodie, 141, West George-street, Glasgow.

ROXBURGHSHIRE. — ADDITIONS, — The C.C. have agreed to carry out additions to the Newton St. Boswell's school. The architects are Messrs. Reid and Forbes, 17, Great Stewart-street, Edinburgh.

STIRLING. — CHURCH.—Plans are to be prepared for a new Holy Trinity Episcopal school. Mr. Andrew Malcolm, Education Architect, Old Infirmary-buildings, Spittale-street, has prepared the plans.

TROON. — HOUSES.—The Dean of Guild Court has passed plans presented by the T.C. for 221 houses on the Muirhead site, at £104,185.

VALE OF LEVEN.—SCHOOL.—Plans are to be prepared for a new public school, the architect being Mr. Joseph Weekes, 18, Park-circus, Kelvin-grove, Glasgow.

WIGTON.—SCHOOL.—Plans are to be prepared by Mr. R. G. Logan, County Education Offices, Stranraer, for a new public school.

TENDERS ACCEPTED

Dumfries.—Re-erection of factory recently destroyed by fire, for the Wolsey Co., Ltd., Ryeside. James M. Bowie, architect and quantity surveyor, The Crofthill, Dumfries :—Excavation, brick and mason—*R. K. Brown & Son. Steel construction—*Johnstone & Clark. Plumbing and sanitary engineering—*J. Dickson & Sons. Joinery, ironmongery and carpentry—*W. Tait & Sons. Painter and allied works—*Morley & Grierson. Slating work and roughcasting, etc.—*Dickson & Son. (All of Dumfries.)

Edinburgh.—Reconstruction and additions to the Scottish Episcopal Church of Scotland, St. Salvador, Shaughton-rd. Hugh Tarbolton, R.S.A., and Sir Matthew Ochterlong, Bart., architects, 4, St. Colme-st., Queen-st. :—Excavation and mason works including new tower and spire, etc.—*J. Monteith, Ltd., Dalkeith. Joiner, carpentry and ironmongery—*A. Thomson, Edinburgh. Plumber work and sanitary engineering, etc.—*T. Clarke & Co., Edinburgh. Plaster, lathing and slater—*J. Monteith, Ltd., Dalkeith. Electrical fittings and installation, etc.—*H. B. Tranners, Ltd., Edinburgh.

Glasgow.—Works, for the Corporation :—Blue vale School—*W. MacKerracher, £601 6s. 10d. Adephia-ter. School—*Muir Decorators, Ltd., £544 13s. 5d. Percy-st. Special School—*W. Glen & Son, £429 12s. 8d. Gartraid School—*R. White & Son, £413 10s. 7d. St. George's-rd. School—*Scottish Wholesale Co-operative Society, Ltd., £547 3s. 8d. Eastmuir Special School—*W. Rae, £161 15s. 5d. Greenfield School—*G. Bulloch & Co., £540 13s. 8d. Rottenrow Special School—*J. & R. Anderson, £400 9s. 6d. Rutland-cres. School—*J. Robertson, £321 17s. Knightswood Temporary School—*J. & J. Grant, £181 2s. 6d. St. Philmonic's Temporary School—*J. Hodgins & Sons, £340 4s. The High School—*W. MacKerracher, £895 3s. 11d. St. Francis' (Boys) School—*T. G. Watson, £641 18s. 5d. Reconstruction and addition at John-st. offices—patent glazing works, etc.—*Pennycook Patent Glazing & Engineering Co., Ltd., £132 12s. 9d.

Hamiltonhill.—Public school. William MacCaig, architect, 129, Bath-st. :—Electrical fittings and installation—*Glasgow Direct Labour Electrical Dept., £1,400.

King's Park.—Public school. William MacCaig, architect, 129, Bath-st. :—Heating engineering and installation—*J. L. Saunders, Ltd., Glasgow, £789 3s. 1d. (All of Glasgow.)

Kirkintilloch.—131 houses at Green estate, for T.C. :—Digger, bricks, etc.—*Allan Bros., Watson & Henderson, Chryston. Carpenter and joiner—*J. J. & P. M'Lachlan, Larbert. Glazier—*E. Macindoe, Kirkintilloch. Slater—*J. Wallace & Sons, Chryston. Roughcast—*Matthew Thom & Co., Airdrie. Plumber—*James Somerville (Govan), Ltd., Glasgow. Plaster work—*W. & J. Somerville, Kirkintilloch. Painter—*Robt. White & Son, Kirkintilloch. Electrical installation—*D. M'Innes & Son, Lenzie.

Scotland (H.M.O.W.).—Tenders for the week ending June 21 :—Auldearn new telephone repeater station, erection—*Alexander Milne & Son, Banff-st., Buckie. Aultmore new telephone repeater station, erection—*Alexander Milne & Son, Banff-st., Buckie.

TRADE NEWS

A.R.P. Lessons.

The Bennett College, Ltd., Sheffield, inform us that they have prepared a course of lessons dealing with the subject of Air Raid Precautions. They will be free to any responsible member of the public.

"Rothwell House," Langham-street, W.

The contract for this building, shown by a perspective on page 1217, has been placed with Messrs. John Laing and Son, Ltd., of N.W.7. Messrs. Marshall and Tweedy, FF.R.I.B.A., are the architects.

A New Machine.

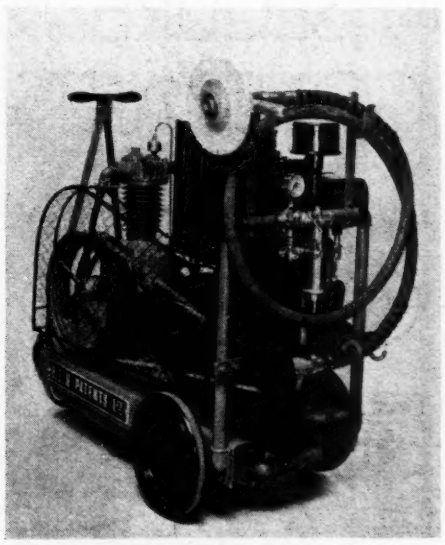
B.E.N. Patents, Ltd., Gorst-road, Park Royal, London, N.W.10, announce a special machine of interest to builders and monumental masons. It comprises a portable air compressor for operating a 1-in. stonemason's chipping hammer, and a flex-shaft drive with rotating head for facing and cleaning stonework. Both the compressor and flex-shaft attachment are driven by the 2½ h.p. water-cooled petrol engine, which is compactly mounted on the portable steel base.

Brass and Copper Sheets and Brass Piping.

H.M. Trade Commissioner at Johannesburg reports that the South African Railways and Harbours Administration is calling for tenders (Tender No. 1757) for the supply and delivery of quantities of brass piping, brass and copper sheets. Tenders, endorsed "Tender No. 1757, for brass piping, etc.," should be addressed to the Chief Stores Superintendent, South African Railways and Harbours Headquarter Office, Johannesburg, by whom they will be received up to 3 p.m. on August 8. A copy of the schedule of requirements, specifications and general conditions of tender may be inspected at the Department of Overseas Trade, 35, Old Queen-street, S.W.1.

Handbook for Architects and Builders.

An interesting handbook for architects, builders and interior decorators has just been published by Celotex, Ltd., whose new factory at Stonebridge Park, Middlesex, is now beginning production. The handbook is a review of the whole range of structural cane-fibre products, and their application to various purposes of architecture, building and interior decoration. The products mentioned range from Celotex insulating board to Celotex mouldings and ornaments and Acousti-Celotex for sound-absorption. A particularly interesting feature of the handbook is a series of pictures of the new Celotex building (Mr. Septimus Warwick, F.R.I.B.A., architect), in which a number of interior photographs depict the effective use of Celotex in scores of different styles. In conjunction with the photographs, sectional plans of the various rooms are published, indicating how the various Celotex products are incorporated.



A STONEMASON'S PORTABLE AIR COMPRESSOR.

The Manufacture and Uses of Zinc.

A brief outline of the processes of manufacture, properties and some of the many applications of zinc as used to-day, is contained in a booklet entitled "Zinc: Its Manufacture and Uses," recently published by the Zinc Development Association, Limited, Great Westminster House, Horseferry-road, S.W.1.

The booklet begins with a short history of zinc, and enumerates the sources of supply and its properties. It goes on to deal with zinc coating processes, including hot-dip galvanising, electro-galvanising, sherardising and spraying processes. Some of the many uses of rolled zinc are described, and space is devoted to zinc alloy die-casting and zinc pigments. This booklet is the first publication of the Association and has been written to serve as an introduction to a series which will deal in detail with the applications of zinc. The next book in the series will be one dealing with zinc roofing. All the publications of the Association will be issued free to persons interested in zinc and its uses.

BUILDINGS ILLUSTRATED

The Assembly Rooms, Bath.

Illustrations of these rooms, together with a description of the alterations and redecoration carried out, are on pages 1220-1221. The principal contractors were Messrs. J. Long and Sons, of Bath, and sub-contractors engaged were: Heating and hot water installation, G. Carey and Sons, of Bath; electric lighting, Wm. G. Walter, Bath; electric light fittings, sanitary fittings and lantern lights, Gardiner, Sons and Co., Bristol; cloakroom fittings, Samuel Parkes and Co.; ironmongery, Parker, Winder and Achurch; ballroom and tea-room spring floors, Francis Morton, Junior, and Co.; oak floors, Horsley-Smith and Co.; linoleum floor coverings, Korkoid Decorative Floors, and James Colmer, of Bath; gas-cooking installation, Bath Gas Co.; electric chair removal hoist and kitchen lift, Pickerings; proscenium fittings, Hall Manufacturing and Supply Co., Ltd.; proscenium curtains, Hall and Dixon; and restoration of the outside stonework, F. J. Amery and Sons, of Bath.

The nine large crystal chandeliers in the ballroom, tea-room and the Large Octagon, and the smaller one in the Little Octagon, have all been restored by Deomosne and Sons, of London. These are not yet in position.

The work is being carried out by Messrs. Mowbray Green and Hollier. F. and L.R.I.B.A., of Bath.

The "Ambassador" Cinema, Kingswood.

This cinema, illustrated on pages 1231-32, was planned by Mr. F. C. Mitchell, L.R.I.B.A. The Berkeley Construction Co., Ltd., of Aldersgate-street, E.C.1, were general contractors, and sub-contractors were: Steelwork, The Aston Construction Co., Ltd.; electrical installation, Frank Angell and Co., Ltd.; heating and ventilating installation, J. Jeffreys and Co., Ltd.; fibrous plaster and solid plastering, Marels and Co., Ltd.; seating, W. Lusty and Sons, Ltd.; carpets, D. Spiro and Sons, Ltd.; acoustic treatment, Honeywill and Stein, Ltd.; vacuum cleaning plant, British Vacuum Cleaner and Engineering Co., Ltd.; projectors, etc., Sound and Cinema Equipment, Ltd.; canopy, metalwork and ironmongery, Garton and Thorne, Ltd.; reinforced concrete stair, steppings, floors and landings, The Helical Bar Engineering Co., Ltd.; metal windows, Crittall Manufacturing Co., Ltd.; joinery, Holloway Joinery Works; rubber flooring, Leyland and Birmingham Rubber Co.; "Hy-Rib" reinforcement, Trussed Concrete Steel Co., Ltd.; asphalt, Excel Asphalte Co., Ltd.; glass treatment to front elevation, Pugh Bros., Ltd.; plumbing and water supply, Berkeley Construction Co., Ltd.; general building materials, Wiggins-Sankey, Ltd.; roofing, The Atlas Stone Co., Ltd.; sanitary fittings, Associated Clay Industries, Ltd.; terrazzo, Marble Mosaic Co., Ltd.; sound installation, British Thomson-Houston Co., Ltd.; fire appliances, The Pyrene Co., Ltd.; neon lighting, Pearce Signs, Ltd.; lightning conductors and shutters, W. J. Furse and Co., Ltd.; electric light fittings, F. H. Pride and Co., Ltd.; café furniture, Lloyd Loom; ticket machines, Automatic, Ltd.; screen, Stableford All-Metal Screens, Ltd.; gas equipment, Bristol Gas Co.; and decorative mirrors, M. Kutner.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

* Denotes *accepted.*
† Denotes *Provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government departments.*

Atcham.—Reservoirs, laying water mains, erection of pump-house, etc., in connection with the West Atcham water supply scheme, for R.D.C. E. F. Wilson, Resident Engineer :—*M. A. Boswell, School-st., Wolverhampton, £60,341 14s. 3d. (in lieu of tender withdrawn).

Bathaven.—Houses at Batch Cottages at Wellow, for R.D.C. :—*E. Mortimer & Son, £10,600.

Battersea.—Works, for B.C. :—Supply and laying of Jarrah wood-block flooring in new meter and rental wiring store, Electric House—*Acme Flooring and Paving Co., Ltd., River-rd., Barking, £622 5s. Stewarts-ln. estate—Internal redecorating, etc., works : Block 1 (21 dwellings) and Block 2 (24 dwellings)—*Borough Surveyor, £408 13s. 10d. and £480 2s. Alter and adapt platform in lending department for use as an office and adapt existing office as mess-room, Southlands Library—*Borough Surveyor, £138 14s. 4d.

Bedford.—Development for housing of Biddenham Works estate, for Kempston Hoo (Bedford), Ltd., Old Ford End-rd. F. H. Shearley, architect, 336a, Station-rd., Harrow :—*Structural Contractors, Ltd., 36, Victoria-st., S.W.1.

Bedford.—Extension of accommodation at police station, for T.C. :—*R. Jeakings, £369.

Boston.—Houses and bungalows, for R.D.C. W. R. Beardall, A.I.A.S., S. :—
*J. W. Greetham, Seaview-rd., Skegness—Butterwick, £2,174; Freiston, £3,562; Kirton Fen, £4,115.
*J. A. Hutson, Old Leake, Boston—Wrangle, £1,497.
*Geo. Weaver, Low-rd., Wyberton, Boston—Swineshead, £1,219.
*A. T. Hayes, Spain-ln., Boston—Brothertoft, £1,995 and £660.
(All subject to Ministry's consent.)

Brentford.—New domestic and science rooms at Highfield Modern School, for T.C. :—Masons, *W. Garnett & Co., £1,263; joiners, *Thompson & Co., £317; plumbers, *F. Robinson, £258 4s. 4d.; plasterers, *Crabtree & Berry, £540.

Brighton.—Sub-station, foundations, etc., at Beechwood-av., Withdean Estate East, for T.C. W. N. C. Clinch, E. and Manager :—*T. J. Braybon & Son, Ltd., Princes House, 169, North-st., Brighton, 1, £374 9s.

Bristol.—184 and two larger type houses on Knowle and Bedminster estate, for T.C. :—*John Knox (Bristol), Ltd., £64,392 and £1,500.

Burnopfield.—Rebuilding hotel for W. B. Reid & Co., Ltd., Newcastle-on-Tyne. Hetherington & Wilson, architects, County-chams., 52, Westgate-rd., Newcastle-on-Tyne :—*R. W. Bell and Co., Grantham-rd., Newcastle-on-Tyne.

Cambridgeshire.—County girls' school, for C.C. :—*Coulson & Son, Ltd., £38,588.

Cardiff.—104 houses on Highmead estate, for T.C. G. H. Whitaker, City Engineer :—
66 houses—
*E. Addicott & Son, 135, Corporation-rd., Cardiff £25,011
38 houses—
*R. B. Fear, 45, Warwick-st., Cardiff 12,915

Carlisle.—Rebuilding Art Gallery after fire, for T.C. P. Dalton (A.), City Architect, 18, Fisher-st. :—*Direct Labour Department.

Carlton.—Pavilion, King George V recreation ground, Standhill-rd., for U.D.C. J. A. West, S. :—*T. J. Walker & Co., Main-rd., Gedling.

Chapel-en-le-Frith.—8 parlour type and 2 non-parlour type houses, for R.D.C. T. Dinsdale, Inspector and S. Quantities by the S. :—2 houses, Charlesworth, *Crompton Bros., Hyde, £1,329 16s.; 6 houses, Chinley, *A. J. Redfern & Sons, New Mills, £3,150; 2 houses, Hayfield, *A. J. Redfern & Sons, New Mills, £1,068.

Chelmsford.—Building of the new junior and infants' school, for managers of the Victoria and St. Peter's Church Schools :—*A. J. Arnold, Chelmsford and Leigh-on-Sea, £10,169.

Chepstow.—10 houses, for R.D.C. H. J. Ward, S. :—

J. R. Wilkins, Llanwern, Newport	£4,903 2
E. Henries, Caldicot	4,585 0
F. & J. Withers, Pontskewett	4,323 0
*H. W. Bate, Langstone, nr. Newport	4,214 14
A. & A. L. Watkins, Bulwark, Chepstow	4,065 0

Chester.—Works, for T.C. : Reboarding floors of girls' and infants' department of Victoria-rd. Council school :—*R. W. Brooke & Co., Ltd., Liverpool, £114 15s. 2d. Demolition of first series of properties comprised in Princess-st., Crook-st. and Goss-st. compulsory purchase orders :—*Leighton Harding, Nantwich, £415. Reboarding of wards at City Hospital :—*W. H. Brooke & Co., Ltd., Liverpool, £157 7s.

Chesterfield. — Rebuilding welfare institute, Station-la., Old Whittington, for Miners' Welfare Committee. Plans by F. Cantrell, Sheepbridge Coal and Iron Co., Ltd. :—*C. Vallance & Son, Clumber-st., Mansfield.

Chesterfield.—Garage block, Knifesmith-gate, for J. B. White & Sons, 9, High-st. Harold Taylor, consulting engineer, Regal-chams., Cavendish-st. : —*A. F. White, Rother Works, 198, Derby-rd., Chesterfield, £1,700.

Cromer.—12 houses on housing site, Suffield-pk., for U.D.C. G. Eric Mitchell (A.), architect :—

A. Leake	£5,493 0
B. E. Gotts	4,557 10
J. Beckett, Hindolveston, Guist	4,475 0
H. Bullen & Son, Ltd.	4,221 0
*Childs & Spinks	3,901 8

(Remainder of Cromer.)

Darlington.—32 houses in Davidson-rd :—*Bussey & Armstrong, Brinkburn-rd., Darlington.

Darlington.—Heating installation, etc., at new electricity offices, for T.C. :—*Direct labour, £1,900.

Darlington.—Improvements to High-row public convenience, for T.C. E. Minors, B.E. :—*Direct labour, £1,350.

Doncaster.—New Waverley school, for E.C. Walker & Thompson (F.), 7b, Hallgate :—Electrical installation—*N. S. Milan, Doncaster, £449 11s. 6d. Heating—*Wright Bros. (Sheffield), Ltd., Sheffield, £2,518 12s. 7d. Sanitary fittings—*J. Duckett & Son, Ltd., Burnley, £464. Metal windows—*Metal Casements, Ltd., Walsall, £1,808 12s. 2d.

East Dereham.—New building, for H.M. Inland Revenue and Customs and Excise, in Church-rd. :—*Walker (Tooting), Ltd., Tooting Broadway, S.W.17.

Forden.—Six houses at Churchstoke, two houses at Forden, and two houses at White Gritt, for R.D.C. :—*J. S. Holt, Winstanton, Craven Arms, £3,902.

Greenwich.—Works, for B.C. :—
Wood block flooring for 24 flats, Blackheath Hill—
Calders, Ltd.—(a) £371 5s., (b) £391 1s., (c) £460 7s.
Jos. F. Ebner, Ltd.—(a) £381 14s. 1d., *(b) £357 7s. 11d., (c) £459 10s. 1d.
Hollis Bros. & Co., Ltd.—(a) £463 4s., (b) £424 12s.
Horley, Smith & Co. (London), Ltd.—(a) £360 18s. 9d., (b) £368 3s., (c) £452 7s. 6d., (d) £476 8s. 8d.
Improved Wood Pavement Co., Ltd.—(a) £440 16s., (b) £395 4s.
Stevens & Adams, Ltd.—(a) £375 7s. 6d., (b) £387 11s. 3d., (c) £468.
(a) deal, (b) pine, and (c) birch; (d) beech.
Asphalt roofing for 24 flats in Blackheath Hill—

General Asphalte Co., Ltd.	£343 10 3
Limmer & Trinidad Lake Asphalte Co., Ltd.	349 9 6
Neuchatel Asphalte Co., Ltd.	335 19 4
Ragusa Asphalte Paving Co., Ltd.	338 10 2
*Val de Travers Asphalte Paving Co., Ltd.	319 19 2

(All of London.)

Gwyrfai.—Housing, for R.D.C. :—101 houses at Deiniolen, *Alun Edwards, Ltd., Wrexham, £40,222 10s.; roads for Deiniolen houses, *Davies Bros., Barmouth, £2,273 19s. 3d.; roads for Llanllyfni houses, *Peter Griffiths, Llandudno, £758.

DON'T TENDER UNSUCCESSFULLY

SECURE CONTRACTS WITH

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THE STEEL SCAFFOLDING CO., LTD.

Imperial House, 80, Regent St., London, W.1

Telephone : Regent 1157

Halesworth.—Building work in connection with the reorganisation scheme, for Trustees of the Patrick Stead Hospital :—*Wm. C. Reade, Aldeburgh, £2,287.

Harlech.—New Coleg Harlech Library, for Governors. G. Morris, architect, 120a, High-st., Portmadoc :—Builder—*J. L. Evans, Pwllheli. Concrete floor—*Trussed Concrete Steel Co., Ltd., Horseferry-rd., London, W.1.

Harrogate.—Rebuilding of covered market hall, for Corporation. L. H. Clarke, A.M.I.C.E., B.S. :—Constructional steelwork—*Octavius Atkinson & Co., Ltd.

Haywards Heath.—Offices, etc., Boltro-rd., for Mid-Sussex Joint Water Board. J. L. Denman (F.), architect, 27, Queen's-rd., Brighton :—*R. Cook & Sons, Ltd., Springfield-rd., Crawley.

Hebburn-on-Tyne.—26 houses in Lambley-cres-and Victoria-rd. West. T. A. Page, Son & Bradbury, architects, 75, King-st., South Shields :—*J. M. Black (Junior), Ltd., Station-rd., Hebburn.

Hendon.—Works, for T.C. :—Constructional steelwork at Woodside Park junior and infants' school —*Cook & Co., Ltd., S.W.9, £514 3s. 9d. Heating installation at same school—*Hope's Heating and Lighting, Ltd., £1,448.
Annual repairs, etc., to schools :—
*J. N. Jones, 4, Southbourne-court, N.W.9—external redecorations, Barnfield school and cottage, £215.
*W. Richards & Sons (Hendon), Ltd., Church-rd., N.W.4—external redecorations, Burnt Oak school and cottage; £105; external redecorations, Childs Hill school and cottage, £145; internal redecorations, Sunnyfields school, £125; internal redecorations, Childs Hill infants' school, £125.
*Buckingham & Sons, Ltd., Vivian-av., N.W.4—external redecorations, Garden Suburb school and cottage, £185; external redecorations, The Hyde school and cottage, £173; external redecorations, Wessex Gardens school and flat, £175; internal redecorations, Clitterhouse school and bungalow, £177; internal redecorations, Deansbrook junior school and bungalow, £173.
Steel windows, lights, wrought ironwork in connection with construction of public convenience at Hendon Central—

Morris-Singer Co., S.W.8	£301 0 9
The Potter Rax Gate Co., N.1	293 0 6
W. G. Kaleyards, Ltd., Chester	251 7 0
Garton & Thorne, Ltd., N.W.1	224 5 6
*Mellows & Co., Ltd., 54, Victoria-st., S.W.1	223 0 4

Holborn.—Cleansing, painting and other works at public mortuary and at disinfecting station, Goldsmith-st., W.C.2, for B.C. :—*W. T. Lawrence & Son, £130.

Isleworth.—School for senior boys at Smallberry Green, Isleworth, for 560 places, for Heston and Isleworth T.C. J. G. Carey, A.M.Inst.C.E., B.S. :—*G. H. Burgess, 135, Beresford-av., Tolworth, £34,515 1s. 3d.

Islington.—Works, for B.C. :—
Repairs to 3 and 5, Barnsbury-gr.—

John C. Mather & Son	£233 0 0
Flesher Bros., Ltd.	231 12 6
W. T. Lawrence & Son	190 18 0
W. C. Thomerson	183 0 0
G. J. Evans	173 0 0
Greenaway & Son	150 2 0
*Thomas Cole (Barnsbury), Ltd., 125, Offord-rd., N.1	136 0 3

Repair and redecoration of greenhouses, lodges, etc., at the Council's Cemetery at East Finchley—

J. C. Mather & Son,	£473 0 0
Flesher Bros.	410 10 0
Thos. Cole (Barnsbury), Ltd.	368 0 0
Greenaway & Son	363 5 3
W. T. Lawrence & Son	360 1 8
G. J. Evans	358 0 0
W. C. Thomerson	348 0 0
*C. & F. Bryen, 48, The Broadway, Crouch End, N.8	*296 16 4

Demolition of chimney stack, electricity works—

*Francois Cementation Co., Ltd., 39, Victoria-st., S.W.1	£330 13

75 dwellings on the site of 1-10 (inclusive), Hillrise-rd., as an extension to the Blythe Mansions housing scheme—

Geo. Parker & Sons, Ltd.	£56,602
Mullen & Lumsden, Ltd.	55,900
Allen Fairhead & Sons, Ltd., Enfield	55,839
Speirs, Ltd.	55,813
Walter Lawrence & Son, Ltd.	55,810
R. J. Rowley, Ltd.	55,766
Henry Knight & Son	55,517
Galbraith Bros.	55,260
Patman & Fotheringham, Ltd.	53,882
Gee, Walker & Slater, Ltd.	51,181
*Haymills (Contractors), Ltd., Hanger Green, W.5	50,915

(Remainder of London.)

Kettering.—Internal alterations and new offices, 39, Newland-st., for Co-operative Permanent Building Society, New Oxford House, Hart-st., London, W.C.1. P. Morrey (A.), architect, New Oxford House, Hart-st., Holborn, W.C.1 :—Building work—*Kettering Industrial Co-operative Society, Ltd., Havelock-st., Kettering. Shop-front—*H. N. Barnes, Ltd., Peterborough-rd., Fulham, S.W.6.

Lanchester.—Hospital, for Lanchester Joint Hospital Board, with accommodation for 144 beds. W. & T. R. Milburn, architects, 17, Fawcett-st., Sunderland :—*G. Gradon & Sons, North-rd., Durham, £101,500.

London.—Works, for City Corporation :—
Demolition of 39, 40 and 41, Foster-la., and 148, Cheapside—

Coles Demolition & Excavation, Ltd.	£985
Willment Bros., Ltd.	972
H. Sabey & Co., Ltd.	954
Goodman Price, Ltd.	876
Gorst & Co., Ltd.	774
St. Mary's Demolition & Excavation Co., Ltd.	748
*H. J. Moyes	670

Repairing and painting eight underground and nine aboveground conveniences—

Hall, Beddall & Co., Ltd.	£819 0 0
F. J. Howard	636 9 5
Falkus Bros., Ltd.	547 0 0
*W. R. Hargrave & Sons	517 1 3

External painting and repairs to (a) artisans' dwellings, (b) "Bearsted House," (c) "Dutton House"—

	(a) £ s. d.	(b) £ s. d.	(c) £ s. d.
Hall, Beddall & Co., Ltd.	£797 0 0	172 0 0	164 0 0
A. G. Scott, Ltd.	674 0 0	161 0 0	141 0 0
W. R. Hargrave & Sons	607 14 6	161 14 6	159 15 2
Falkus Bros., Ltd.	572 0 0	138 0 0	117 0 0
*F. J. Howard	539 18 1	136 12 6	116 18 6

Cleansing, redecoration and repair required, Guildhall School of Music and Drama—

Rice & Son, Ltd.	£330
Hall, Beddall & Co.	280
Stapleton & Sons, Ltd.	273
Trollope & Colls, Ltd.	271
John Mather, Ltd.	264
Walter Lawrence & Son	253
*F. J. Howard	237
Courtney & Fairbairn	226
Higgs & Hill, Ltd.	217
A. G. Scott, Ltd.	201

Replacing defective boarding at Metropolitan Cattle Market—

W. G. Beaumont & Son	£1,522
C. & T. Painters, Ltd.	1,501
Lister & Co. (Builders), Ltd.	1,375
Walter Gladding & Co., Ltd.	1,371
N. Lidstone & Son	1,355
*Courtney & Fairbairn, Ltd.	1,323

Further covered accommodation for the General Markets at Metropolitan Cattle Market—

Wright, Anderson & Co., Ltd.	£1,635 0 (less 2½ per cent. discount.)
Matthew T. Shaw & Co., Ltd.	1,468 0
Boulton & Paul, Ltd.	1,425 0
London & Wales Steel Construction Co., Ltd.	1,337 0
F. Braby & Co., Ltd.	1,275 0
*Harland & Wolff, Ltd.	1,213 10

Cleaning, painting, etc., Holborn-viaduct bridges over Farringdon-st. and Shoe-la.—

Hall, Beddall & Co., Ltd.	£1,727
F. J. Howard	1,375
W. G. Beaumont & Son	1,364
W. R. Hargrave & Sons	1,205
*A. G. Scott, Ltd.	1,115

¶London (Air Ministry).—New contracts for June 18 :—Worthy Down—artificers' works—John Hunt, Ltd., Gosport. Thorney Island, Hants—sea defences—Crosby & Co., Ltd., Farnham. Bicester and Upper Heyford—builders' work—J. F. Booth & Son, Banbury. Great Rissington — heating of sheds—Richard Whittington & Co., Ltd., London, S.E.1. Abingdon — builders' work — Wooldridge & Simpson, Ltd., Oxford. Quedgeley—construction of equipment depot—G. Percy Trentham, Ltd., London. Kirkbride—various buildings and external services—Harold Arnold & Son, Ltd., Doncaster.

¶London (H.M.O.W.).—Tenders for week ending June 16 :—Soda crystals—J. Manger & Son, Ltd., 57, Kingsland High-st., E.8. Pentre Post Office and Telephone Exchange—erection—Tucker Bros., Ltd., 181 and 183, Broadway, Cardiff. Telephone Exchange, Rothwell (Yorks)—erection—J. W. Shippen & Sons, Ltd., Bromhill Works, York-rd., Leeds. Telephone Exchange, Owlerton (Sheffield)—extension—John Middleton, Ltd., 78, Hoyle-st., Sheffield. Bishopton Royal Ordnance Factory—sulphuric acid concentration plant—Bamag, Ltd., 53, Victoria-st., S.W.1. Bow-back Windsor chairs—Owen Haines & Son, Green-st. Chair Works, High Wycombe; A. & F. Howland (Wycombe), Ltd., Eaton-avenue Chair Works, High Wycombe; and Anthony Taverner, 15, Nelson-parade, Bedminster, Bristol 3. Adjustable desk standards—Mek-Elek Enginering, Ltd., 16, Douglas-st., London, S.E. Post Office and Telephone Exchange, Attleborough, Norfolk—erection—Thos. Gill & Son, Rupert-st., Norwich. Corduroy trousers—Redman Bros. (J. & R. Redman, Ltd.), Foster Mill, Hebden Bridge. Pedestal writing tables—H. Baldock, 5/7, Hay-pl., Liverpool, 3; and H.B.D. Co., Ltd., Clifford-rd., Walthamstow, E.17. Royal Ordnance Factory, Irvine—two capstans and bollard—Royce, Ltd., The Crane Works, Loughborough. Tyres and tubes — Goodyear Tyre & Rubber Co. (Gt. Britain), Bushbury, Wolverhampton. Steel table racks—Waddells (Stratford Steel Equipment), Ltd., Hall-rd., Stratford, E.15, and Milners' Safe Co., Ltd., 12 and 13, Newgate-st., London, E.C.1. Perranporth Telephone Exchange—erection—E. B. Wright, 58, Edgcumb-ave., Newquay. Royal Ordnance Factory, Chorley — steam meters—Electroflo Meters Co., Ltd., Abbey-rd., Park Royal, N.W.10. Southampton R.A.F. Bombing School—alterations and adaptations—A. Jukes & Son, Ltd., Paynes-rd., Southampton. New Public Offices (Southern Block)—installation of cables—W. T. Henley's Telegraph Works Co., Ltd., Holborn-viaduct, E.C.1. Abercorn Telephone Exchange—maple block floor—Vigers Bros., Ltd., 26, Fish-st. Hill, E.C.3. Royal Ordnance Factory, Bishopton—fume hoods and ducts—Fred. Braby & Co., Ltd., Petershill Road, Glasgow. Royal Ordnance Factory, Bishopton—mixed acid storage tanks—A. F. Craig & Co., Ltd., Caledonia Engineering Works, Paisley. Royal Ordnance Factory, Irvine—acid-resisting floor coverings, linings for machine foundations, etc.—Prodorite, Ltd., Eagle Works, Wednesbury. New Public Offices—installation of switchgear—Artic Fuse & Electrical Mfg. Co., Birtley, Co. Durham.

¶London (War Office).—Works contracts placed during the week ended June 16 :—Gillingham—huts—F. Parham, Ltd., Gillingham. Didcot—lining sheds—Building and Public Works Construction Co., Ltd., Swindon. Southern Command—steel framework for sheds—Fairfield Shipbuilding & Enginering Co., Ltd., Chepstow; J. Lysaght, Ltd., Bristol; and Braithwaite & Co. (Engineers), Ltd., West Bromwich. Mill Hill Barracks—alterations to married soldiers' quarters—H. Lacey & Sons, Luton. Upton, Wirral—structural steelwork—E. F. Blakeley & Co. (Liverpool), Ltd., Birkenhead. Chatham, Kitchener Barracks—supply and erection of huts—Ashford Builders' Co., Ltd., London, W.C. York—central heating installation—G. N. Haden & Son, Ltd., York.

London.—Pithead baths, for Miners' Welfare Central Fund Committee. J. H. Forshaw, architect, Romney House, Marsham-st., London, S.W.1 :—At Cadley Hill Colliery, South Derbyshire—*George Hodges & Son, Ltd., Horninglow-st., Burton-on-Trent, £11,090. At North Walbottle Colliery—*Stephen Buy, 224, Westgate-rd., Newcastle, £21,100. At New Pit Colliery, West Yorkshire—*Windsor Floors, Ltd., Mitcham, £3,039. At Wigan Junction Colliery—*John Dickinson & Co. (Bolton), Ltd., Fairclough-st., Bolton, £15,488.

Longbenton.—112 houses, Camperdown estate, for U.D.C. W. Bean, S. :—*R. Carse & Son, Ltd., Amble (subject to M.H. approval).

Malton.—50 houses, for R.D.C. :—*A. & J. Grayshon, Drighlington, Bradford, £21,193 10s.

Mitford-Launditch.—Houses, for R.D.C. :—*H. Smith, Honingham, 4 at Hockering, £1,484; 2 at Garveston, £714 10s.; *E. Melton, Beetley, 10 at Shipdham, £3,750; 2 at Wendling, £830; *H. Shrive, Wells, 4 at Horningtoft, £1,715 10s.

Morpeth.—Rebuilding of Chevington Cemetery wall, for R.D.C. :—*R. & G. Brown, Amble, £172.

Moulton.—Demolition of existing brick Broadwater Bridge over Moulton River at Moulton and construction of new bridge carried on piles, for Holland (Lincs) C.C. W. A. Rogerson, C.S., Boston :—*Yorkshire Hennebique Contracting Co., Ltd., Viaduct Works, Kirkstall-rd., Leeds, 4.

Newark.—Works for the T.C. :—Depot and decontamination station, Queen's-rd.—*W. Smith (Newark), Ltd., Mill Gate, Newark, £5,875. Weights and measures office, Baldertongate—*G. Brown & Son, London-rd., Newark, £459.

Newcastle-on-Tyne.—Painting work, for City Council :—Painting Tyne Bridge—*Structural Painters, Ltd., £1,733; 380 houses on Scotswood estate—*Merriles & Denton, Ltd., Gateshead, £921; 380 houses and the iron and wood fencing of 172 houses on Walker estate—*Stephenson & Co., Newcastle, £983; 384 houses in Rochester Dwellings—*M. Alexander & Sons, Newcastle, £634; 166 houses on Two Ball Lonnen estate—*J. Forster & Son Newcastle, £249.

North Riding.—Extensions to Dormanstown school and erection of junior and infants' school, for C.C. County Architect, Northallerton :—*W. A. King & Sons, North Ormesby, Middlesbrough.

Oswestry.—12 non-parlour, three-bedroomed type houses on Clifford's-gdns., Gatacre-rd., for T.C. :—*Griffith Bros., Brownlow-rd., Ellesmere.

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Penistone.—14 houses, Roughbirchworth-rd., Oxspring, for R.D.C. Lunn, Heppenstall & Lunn, architects, Milnsbridge, Huddersfield :—*Ackroyd & Abbott, Sheffield, £5,522.

Penybont.—Convenience at Marias-rd., Pyle, for R.D.C. J. Simon Davies, F.S.I., S., Penybont Office, Coity-rd., Bridgend. Quantities by S. :—

W. T. Williams, Porthcawl	£536
W. H. Whitlock, Aberkenfig	518
*Direct Labour.	

Portsmouth.—Works, for T.C. :—

Constructional steelwork in connection with provision of new accommodation in Guildhall—

Braithwaite & Co., Engineers, Ltd., London (less 2½%)	£1,450 0 0
Robert Watson & Co. (Constructional Engineers), Ltd., Bolton	1,395 10 0
Furness Shipbuilding Co., Ltd., London (less 2½%)	1,372 6 1
Geo. Sands & Son, Ltd., Colwick, Nottingham	1,361 12 0
Dawnays, Ltd., London	1,341 0 0
Thomas Walmsley & Sons, Bolton	1,338 0 0
Horseley Bridge & Thomas Piggott, Ltd., Tipton (less 2½%)	1,368 16 2
Fleming Bros., Glasgow (less 2½%)	1,368 12 0
Dorman, Long & Co., Ltd., London (less 2½%)	1,366 2 8
E. C. & J. Keay, Ltd., Birmingham (less 2½%)	1,365 0 0
Gibbons Bros., Ltd., Dudley	1,360 8 10
Lambhill Ironworks, Ltd., Glasgow (less 2½%)	1,354 14 11
Banister, Walton & Co., Ltd., London (less 2½%)	1,353 10 0
Rubery Owen & Co., Ltd., London (less 2½%)	1,340 7 11
*Redpath, Brown & Co., Ltd., London (less 2½%)	1,338 17 9
Peirson & Co., Ltd., London (less 2½%)	1,338 2 8
Sub-station, Cornaway-in., Portchester—*Hamper	£356 7 0

66 flats and 6 shops, Wymering—

John W. Jones (Weybridge), Ltd.	£33,999
Leightons (Contractors), Ltd.	32,500
Lindsay Parkinson & Co., Ltd.	31,800
Patching & Co.	30,181
Portsmouth, Gosport and District Builders' Guild, Ltd.	28,863
M. J. Gleeson, Ltd.	28,271
H. E. Pitt, Ltd.	28,076
Eames & Calverley	27,250
Unit Construction Co., Ltd.	26,442
A. P. C. Wray, Ltd.	25,024
*Browning Bros.	24,207

216 houses and 4 shops, Wymering—

Butler Bros. (Birmingham), Ltd.	£121,880 0
Eames & Calverley	99,561 12
John W. Jones (Weybridge), Ltd.	98,297 0
Leightons (Contractors), Ltd.	97,305 0
M. J. Gleeson, Ltd.	97,179 0
Lindsay Parkinson & Co., Ltd.	96,870 0
Portsmouth, Gosport and District Builders' Guild, Ltd.	94,471 2
A. P. C. Wray, Ltd.	93,460 0
Unit Construction Co., Ltd.	86,374 0
Wilmonds	85,946 0
H. E. Pitt, Ltd.	85,720 0
*Browning Bros.	79,359 0

192 houses and 2 shops, Wymering—

Butler Bros. (Birmingham), Ltd.	£108,060 0
John W. Jones (Weybridge), Ltd.	89,525 0
Eames & Calverley	89,473 14
M. J. Gleeson, Ltd.	88,145 0
Lindsay Parkinson & Co., Ltd.	87,600 0
Portsmouth, Gosport and District Builders' Guild, Ltd.	84,845 9
A. P. C. Wray, Ltd.	85,698 0
Leightons (Contractors), Ltd.	82,880 0
Unit Construction Co., Ltd.	78,346 0
H. E. Pitt, Ltd.	77,122 0
*Browning Bros.	71,527 0

Portsmouth.—Third section of extensions to Cathedral Church of St. Thomas of Canterbury. Sir Charles Nicholson, R.A., architect, 2, New-sq., Lincoln's Inn, W.C.2 :—*Bowman & Sons, Stamford. (Cost about £30,000.)

Prestwich.—Girls' senior school, Hope Park, Bury New-rd., Hilton-la., for Lancashire E.C. Stephen Wilkinson (F.), County Architect, Preston :—*Atlas Building & Construction Co., Wilderspool Causeway, Warrington, £11,350.

Rutland.—Erection of Uppingham central school, for E.C. W. Rosser, architect, 38, Kingsley-rd., Northampton :—*W. W. Webster, Guilsborough, £10,257 1s. 9d.

St. Ives.—Constable's house and garage at police station, for Hunts. C.C. :—*F. Hale & Sons, £875.

Sale.—Reconstruction of "Legh Arms" hotel, Northenden-rd., for Joseph Holt, Ltd., Derby Brewery, Cheetham, Manchester. Graves & Ellerton, architects, 80, Mosley-st., Manchester :—Contractors and builders—*T. Gaskell & Co., Withington; masonry—*F. & J. Halliwell, Manchester; brickwork—*G. & W. Smith (Builders), Ltd., Manchester; plastering—*A. Eldridge, 6, Blossoms-ln., Stockport.

Sittingbourne.—Temporary classrooms at the county school for girls, for Kent E.C. :—*Whiting Bros., Faversham.

Solihull.—Junior and infants' school, Chapel Fields, for Warwickshire E.C. A. C. Bunch (F.), County Architect, Warwick :—*H. B. Tarleton, 12, Church Green East, Redditch, £21,349.

Southampton.—Works, for T.C. :—
Administration block and nurses' home, West End institution—

J. Hunt, Ltd., Gosport	£53,795 0 0
Jenkins & Sons, Ltd., Southampton	52,699 0 0
F. Kimber & Son, Southampton	51,868 0 0
A. G. Saunders, Ltd., Southampton	50,970 0 0
A. E. Jukes & Son, Ltd., Southampton	50,209 0 0
Brazier & Son, Ltd., Southampton	49,959 0 0
H. E. Pitt, Ltd., Sunderland	49,298 14 0
Grace & Marsh, Ltd., Croydon	49,245 0 0
W. T. Nicholls, Ltd., Gloucester	48,987 0 0
Patching & Co., Worthing	47,520 0 0
John Lewis Building Co., Southampton	46,615 0 0
*J. P. Hounsell, Portsmouth	43,867 8 4

(Borough Engineer's tender: £50,860.)
Office and lavatory in grounds of South Hill reservoir in Glen Eyre—

J. J. Udall's Building Co., Ltd.	£267 0 0
A. E. Jukes & Son, Ltd.	260 18 3
W. & R. Whittington	258 5 0
Jenkins & Sons, Ltd.	256 0 0
Marshall & Coates	243 9 6
*Geo. I. Britten & Sons	234 15 0

(Waterworks Engineer's estimate: £211.)

Sheds at sports centre—

Wheeler & Hann (Southampton)	£1,295 0
J. J. Udall's Building Co., Ltd., Southampton	1,150 0
*Bignell & Gauntlett, Southampton	1,028 16

Manager's house, sports centre—

Bignell & Gauntlett	£1,154 15 6
Brazier & Son, Ltd.	1,098 0 0
G. H. Gosling	1,017 0 0
Wheeler & Hann	971 16 0
*Lloyd & Jenkins	967 0 0

(Borough Engineer's estimate: £900.)

Southport.—24 houses for aged persons in Warwick-st., for T.C. H. L. Bunting, B.E. :—*W. Sutton, Back Harrowby-st., Farnworth, nr. Bolton, £5,589.

Southport.—Piling, foundations, floors and walls for the new purifiers, pipe drainage and revivifying floor to be installed at Crowlands, for T.C. :—*Ferro Concrete Construction Co., Ltd., Derby, £3,355.

Stanley (Yorks).—54 3-bedroom type, 30 2-bedroom type and 20 1-bedroom type houses on Outward Hall estate; also 30 3-bedroom type and 38 2-bedroom type houses on Wrenthorpe housing estate, for U.D.C. A. W. Quibell, architect. Council Offices, Coach-rd., Outwood, nr. Wakefield :—Houses—*Collins & Co. (Builders), Ltd., Leopold-rd., Leeds, 7, £54,000. Streets and sewers—*T. Waddington, Lavefield-ln., Wakefield, £6,070.

Stoke-on-Trent.—Improvements to (a) Summerbank (b) Forster-st. schools, for E.C. :—(a) *S. Kettle & Son, Stoke-on-Trent, £6,564; (b) *J. W. Walton, Stoke-on-Trent, £4,390.

Stourbridge.—Painting farm buildings, farmhouse, cottages, at farm and pumping station, for Stourbridge Main Drainage Board :—*Reed Tooby, Stourbridge, £137 15s.

Stratford.—Alterations to Nodor factory. H. G. Needham, architect, 139, Earlham-gr., Forest Gate, E.7 :—

A. J. Albert, Ltd., Leyton	£1,850
Hales, Ltd., Forest Gate	1,760
Hammond & Miles, Ilford	1,663
*Wood Bros., Vale-rd., Forest Gate	1,368
Steelwork—	
*Albion Iron Co., Ltd., London	1,075
*Smith's Floors, London	475
Offices—	
*Wood Bros., Forest Gate	605

Stretford.—Children's ward at Memorial Hospital, Seymour-gr., for Board of Management of Stretford Memorial Hospital. Percy Howard, architect, 88, Mosley-st., Manchester :—*William Thorpe & Sons, Ltd., Chester-rd., Cornbrook, Manchester.

Surbiton.—Caretaker's cottage at county school for boys, for Surrey E.C. :—*A. S. Ashcroft, Ltd., £764 10s.

Swansea.—Works for C.B. :—Painting dust destructor, *Borough Architect, £144 2s. 3d.; outdoor sub-station at Landore, *E. Turner & Sons, Ltd., £1,019; alterations, Morriston clinic, *Borough Architect, £350.

Torquay.—188 houses at Watcombe, for T.C. :—*Butler Bros. (Birmingham), Ltd., £84,603.

Tunbridge Wells.—Houses on Oak-rd. estate, for T.C. Borough Surveyor and Water Engineer :—*Eames & Calverley, Ringmer.

Walsall.—Hangar, for T.C. A. N. Procter, consulting engineer, 113, Edmund-st., Birmingham :—Builders—*S. J. Smith (Bidford), Ltd., Birmingham; steelwork—*Cross & Cross, Ltd., Walsall.

Walsall.—20 one-bedroom and 12 three-bedroom type houses on Ryecroft housing site, for T.C. :—*W. H. Casey, Walsall, £9,224.

Washington.—40 houses at Heworth-rd., for U.D.C. T. L. Broome, S. :—*Reilly, Washington, £14,830.

Wath-on-Dearne.—80 houses, Newhill housing scheme, for U.D.C. W. E. Haigh, Acting Surveyor :—8 type "A" bungalows—*G. W. Meanley & Sons, Ltd., Melton Park, Doncaster, £2,256. 8 type "B" bungalows—*G. H. Smithersgill, £2,309 4s.; 32 houses, "C" and "D" type—*Roy Worrall, £10,546. 16 type "E" houses—*W. H. Young, Altryn, Ackworth, Pontefract, £6,806 8s. 16 type "F" houses—*E. Brown & Co., £6,086.

Wembley.—Heating installation, Perrin-rd. maternity and child welfare clinic, Sudbury, for T.C. :—*Grant Engineering Co., £165.

West Ashford.—38 houses, for R.D.C. :—*J. J. Clayson & Sons, Lyminge.

Wincanton.—34 brick houses and 8 flats at Ansford, and 16 stone houses, 2 at Alford, 8 at Lovington, 4 at South Barrow, and 2 at Sparkford, for R.D.C. :—*Plummer & Hockey.

Wisbech.—Pumping station, Tydd, for River Nene Catchment Board. H. W. Clark, M.Inst.C.E., chief engineer to Board. R. B. Grantham, Son & Farran, consulting engineers, 5, Little College-st., S.W.1 :—*J. L. Kier & Co., Ltd., 142, Victoria-st., S.W.1, £33,550.

Wisbech.—Factory, for Wisbech Produce Canners, Ltd. H. W. E. Lindo (F.), architect, 37, Panton-st., Haymarket, S.W.1. Messrs. Gleeds, quantity surveyors :—*Walker (Tooting), Ltd., Tooting Broadway, S.W.17.

Wolverhampton.—Rebuilding head offices and showrooms, Clarence-st., Waterloo-st. and Darlington-st., for Wolverhampton Gas Co. Lavender & Twentyman (F. and A.), architects, Waterloo-st., Wolverhampton. Henry Vale and Sons, quantity surveyors, 21, Waterloo-rd., Wolverhampton :—*Wilson Lovatt & Sons, Ltd., Clarence-st., Wolverhampton.

Workington.—Erection of Laverock Hall electricity sub-station, for T.C. C. W. Emanuel, E. :—*J. Gilmore & Son, Banklands, Workington.

York.—Installation of central-heating system at infirmary, for T.C. :—*J. H. Shouksmith & Sons, Ltd., 132, Micklegate, York, £3,005.

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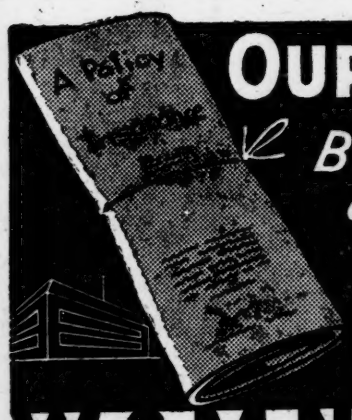

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